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UNITED STATES DISTRICT COURT
EASTERN DISTRICT OF NEW YORK
C.A. No. CV99-7392(JBW)

* *
ROBERT A. FALISE, LOUIS KLEIN, JR., *
FRANK MACCHIAROLA, CHRISTIAN E. *
MARKEY, JR., as Trustees, *
Plaintiffs, *
v. *
THE AMERICAN TOBACCO COMPANY; R.J. *
REYNOLDS TOBACCO COMPANY; B.A.T. *
INDUSTRIES, PLC; BROWN & WILLIAMSON *
TOBACCO CORPORATION; PHILIP MORRIS, *
INCORPORATED; LIGGETT GROUP, INC.; *
LORILLARD TOBACCO COMPANY, *
Defendants. *
* *

VOLUME I
PAGES 1-279 VIDEOTAPED DEPOSITION OF W. KIP VISCUSI
WEDNESDAY, MAY 10, 2000

Job No. 108211

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page 2

VIDEOTAPED DEPOSITION OF W. KIP VISCUSI, a witness called on Behalf of the Plaintiffs, through their undersigned attorneys, pursuant to Federal Rules of Civil Procedure, before Jessica L. Williamson, Court Reporter and Notary Public in and for the Commonwealth of Massachusetts, at the Offices of Goodwin, Procter & Hoar, Exchange Place, 53 State Street, Boston, Massachusetts, on Wednesday, May 10, 2000, commencing at 9:42 a.m.

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UNITED STATES DISTRICT COURT
EASTERN DISTRICT OF NEW YORK
C.A. No. 98 Civ. 3287 (JBW)
* *
BLUE CROSS AND BLUE SHIELD OF NEW *
JERSEY, INC., et al., *
Plaintiffs, *
v. *
PHILIP MORRIS, INCORPORATED, et al., *
Defendants. *

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VOLUME I

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VIDEOTAPED DEPOSITION OF W. KIP VISCUSI, a witness called on Behalf of the Plaintiffs Blue Cross and Blue Shield of New Jersey, Inc., et al., pursuant to Federal Rules of Civil Procedure, before Jessica L. Williamson, Court Reporter and Notary Public in and for the Commonwealth of Massachusetts, at the Offices of Goodwin, Procter & Hoar, LLP, Exchange Place, Boston, Massachusetts, on Wednesday, May 10, 2000, commencing at 9:42 a.m.

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UNITED STATES DISTRICT COURT

EASTERN DISTRICT OF NEW YORK

C.A. No. 98 Civ. 1492 (JBW)

* * * * * * * * * * * * * * * * * * * *

THE NATIONAL ASBESTOS WORKERS MEDICAL FUND, et al.,

Plaintiffs,

v.

PHILIP MORRIS, INC., et al.,

Defendants.

* * * * * * * * * * * * * * * * * * * *

VOLUME I

PAGES 1-279

VIDEOTAPED DEPOSITION OF W. KIP VISCUSI, a witness called on Behalf of the Plaintiffs, by and through their attorneys, pursuant to Federal Rules of Civil Procedure, before Jessica L. Williamson, Court Reporter and Notary Public in and for the Commonwealth of Massachusetts, at the Offices of Goodwin, Procter & Hoar, LLP, Exchange Place, Boston, Massachusetts, on Wednesday, May 10, 2000, commencing at 9:42 a.m.

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Fund, et al.

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ALSO PRESENT: Wayne Martin, Videographer

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P R O C E E D I N G S

THE VIDEOGRAPHER: Okay. We're now on the record. Today is May 10th in the Year 2000. My name is Wayne Martin. This is the deposition of W. Kip Viscusi taken by the Plaintiffs in Blue Cross and Blue Shield of New Jersey, Incorporated, et al., versus Philip Morris, Incorporated, et al. and in related cases.

The deposition is being taken at the offices of Goodwin, Procter & Hoar at Exchange Place in Boston, Massachusetts, zip code 02109. The time is 9:46 a.m. I'm with

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the firm of Esquire Video Services of 216 East 45th Street in New York, New York, zip 10017. The court reporter is Jessica Williams. Counsel will state their appearances, and the court reporter will administer the oath.

MR. STENGEL: James Stengel for the Plaintiff Trustees in Falise v. American Tobacco, et al.

MR. WAGNER: Jeff Wagner for Philip Morris in Falise.

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MR. BOAS: Craig Boas from the Offices of Peter G. Angelos on behalf of The National Asbestos Workers Medical Fund, et al.

MR. NEMSER: Paul Nemser for Philip Morris in the National Asbestos Workers case.

MR. KRAUS: Eric Kraus, Sedgwick, Detert, Moran & Arnold, for Defendant Brown & Williamson in Blue Cross/Blue Shield.

MS. PHILLIPS: Amy Phillips from Arnold & Porter for the Defendant Philip Morris in the Blue Cross case.

MR. BAILEY: William Bailey from Collier and Shannon -- excuse me, Collier, Shannon, Scott here on behalf of R.J. Reynolds Tobacco Company in the Blue Cross/Blue Shield case.

W. KIP VISCUSI,
a witness called on behalf of the Plaintiffs, having first been duly sworn, was deposed and testifies as follows:

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DIRECT EXAMINATION

BY MR. STENGEL:

Q. Good morning, Dr. Viscusi, do you prefer doctor or professor, or does it matter?

A. Professor, so that people don't think I'm a medical doctor.

Q. All right. We'll try and honor that request. As you heard, my name is Jim Stengel, and I represent the plaintiffs in an action Falise v. American Tobacco. Just so you understand the procedure this morning, I will ask questions first. When I ask questions, I will intend, unless I otherwise indicate specifically, to inquire as to your opinions in the case captioned Falise. Counsel for Blue Cross and National Asbestos Workers will in turn ask questions I presume largely relating to matters at issue in their cases. We will work together in trying to avoid undue repetition, and I will cover background that goes beyond your contemporaneous opinions in Falise, but that's sort of the lay of the land with this

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procedure.
Before we start, as you are aware, being a veteran deponent, the parties to this litigation, the Court and the jury will all be relying on the answers you give here today, so it's critical that you have a full and fair understanding of any question I ask. If you feel you don't understand a question I phrased, and I'm sure that counsel will ably help you, please let me know, because if you answer the question, I will assume you understood it, and I'm sure the Court and jury will as well. Is that an acceptable understanding?
A. That's fine.
Q. All right. Before we work through this pile of documentation here, you submitted an expert report dated November 1, 1999 in the Falise matter. Do you intend to supplement or amend that report at all?
A. I have no plans myself to do that.
Q. All right. Well, the report, which is a document that we'll deal with, describes in summary form your opinions. Sitting here
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today, could you tell me what you intend to inform the jury are your opinions in the Falise matter?
A. Well, if you want the complete summary, I would have to look at the report itself and go through each of the items, but in general is that -- my opinion is that there is substantial risk awareness about the hazards of smoking among the smoking population.
Q. And what will you tell the jury about your experience and expertise that should lead them to credit that opinion?
A. Well, I have numerous publications in the area in peer reviewed journals and peer reviewed books. I've been a consultant to the U.S. Environmental Protection Agency on smoking. I have an extensive professional background in the risk area.
Q. Is your methodology for assessing risk perception relevant to that opinion?
A. The character of the surveys is certainly relevant, yes.
Q. When you say "the character of the surveys," what do you mean?
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A. I don't know what you mean by "methodology," so I was trying to figure out what you meant by "methodology", so --
Q. Well, let me make it less obscure hopefully.
You tend to, if not exclusively, work with survey research in this area; is that correct?
A. I've worked with survey research. I've also

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worked with actual data on smoking behavior.
Q. All right. But in each case, you're working with what you would term "objective data"?
A. I didn't use that term. I mean, I would call it data as regards objective measures of subjective risk beliefs, would be the way I -- in many cases. So I'm not sure how you would characterize it, but you're the one who used the term "objective data."
Q. Well, I guess what I'm reaching for is that your opinions that were given as an economist rely on your abilities to assess data or data sets as an economist as opposed to a psychologist who may formulate opinions by speaking to individual smokers or

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nonsmokers; is that correct?
A. I wouldn't want to narrow the -- I guess the professional scope of what I do since I deal in risk beliefs as well, so I'm not sure what you're trying to get me to exclude here in terms of the kinds of things I may or may not be able to do given my expertise.
Q. All right. Well, I'm really trying to get at what you have done in Falise. And your opinions as to risk perception in Falise are predicated on your analysis of a number of data sets; is that correct?
A. Yes.
Q. When were you first retained with respect to the Falise matter?
A. I believe it was last fall. I don't really recall the specific time.
Q. All right. Now, you've had a long-standing relationship with at least counsel for certain tobacco companies; is that correct?
MR. WAGNER: Object to the form.
A. I believe the people in Falise, the first time I ever had contact with them on any case was for the Falise case.

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Q. All right. Who contacted you with respect to Falise?
A. Jerry Pope.
Q. Do you recall what firm he was from?
A. That's easy enough to look -- I don't memorize these things, but Winston & Strawn.
Q. And you believe that conversation or contact took place in the fall of last year?
A. Yes.
Q. At that time had you already been retained as an expert witness in Blue Cross or National Asbestos Workers?
A. I don't recall.
Q. All right. And what was the substance of your communication with Mr. Pope in this first contact in the fall of last year?
A. He indicated that he had a case involving cigarettes, that there was a suit involving cigarettes and asbestos, and he sent me some information and wanted to know what I

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thought about worker perceptions of the risk.
Q. Worker perceptions of the risk of tobacco and asbestos together?
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A. Well, worker perceptions of the risks of smoking, as well as how their perceptions of the risk of lung cancer related to the overall risk of lung cancer for asbestos workers.
Q. Now, you mentioned he sent you some materials. Do you recall what those materials were?
A. May have been a copy of the complaint, possibly articles by Selikoff. I'm not sure exactly what I got when.
Q. Now, we have recently received from Winston & Strawn what were described as reliance materials of yours. Anything you received from Mr. Pope would have been provided to Winston & Strawn for production to us?
A. I don't know what Winston & Strawn gave you.
Q. All right. Well, we'll go through some of that and see.
How long after Mr. Pope provided you with this material did you next speak with him?
A. I don't recall, but I do know that we were in -- there's a period of time we were in
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contact, either every day or every other day, when I was working through my expert report.
Q. All right. And are these telephonic or in-person contacts?
A. Telephonic.
Q. Your report is dated November 1. Do you have an estimate of how much time you spent between your initial retention and the submission of that report?
A. I don't recall.
Q. Do you have billing records that would reflect that?
A. I would.
Q. And you bill by the hour?
A. Yes.
MR. STENGEL: Counsel, we would request production of the billing records.
Q. Did you undertake to produce a first draft of your report?
A. I wrote a -- I don't know whether it went through successive drafts, but I did write a draft of the report. I wrote the report.
Q. All right. But you wrote it yourself as
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opposed to relying on the law firm to produce a draft or drafts for you?
A. Right. I did this remotely, so I was working on this in Wyoming, and it was done on my laptop.

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Q. All right. And as you -- I don't want to misstate your prior answer. I think you were unclear as to whether there had been drafts of the report. Were there successive drafts of the report?
A. I know there were some typos in the initial draft that I know that I changed. So, yes, there was more than one draft.
Q. All right. Did you save prior drafts in any way?
A. I don't have them. I don't save them.
Q. Did they exist in hard copy or only on the hard drive of your computer?
A. I don't think they exist on my computer since it's one document, and so that the computer doesn't retain --
Q. You would overwrite the existing document?
A. Right. It doesn't retain all the drafts.
Q. Going back to your first contact with Mr.

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Pope, he told you about the fact that Falise involved tobacco and asbestos. At that point in time had you done any work relating to -- and this is a specific question -- risk assessments by asbestos workers of their risk from asbestos exposure?
A. I have looked at no data pertaining to the risk beliefs of asbestos workers per se.
Q. All right. Has that changed since your retention?
A. Over time I have looked at information asbestos workers have received, but I have still yet to look at any evidence on risk beliefs of the asbestos workers.
MR. STENGEL: Let's mark your expert statement in Falise as -- and I have marked it as Viscusi 1.
(Document marked as Exhibit 1 for identification)
Q. Sir, there's 1.
MR. STENGEL: And I apologize, I only have two copies, but...
MR. NEMSER: While this is going on, can we have an understanding that an

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objection by one defense counsel is an objection by all?
MR. STENGEL: Certainly.
MR. NEMSER: Okay. And that would be retroactive to this one objection that's been made so far.
MR. STENGEL: Well, gee, I don't know -- no, that's fine.
MR. NEMSER: Appreciate it.
BY MR. STENGEL:
Q. Professor, have you at least had a chance to scan what we've marked as Falise Exhibit 1?
A. Yes.
Q. And is this a statement that you submitted in Falise in November 1991?
A. Yes.

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Q. One housekeeping matter. This attaches a CV and bibliography. Looking at your academic output, I would guess that the bibliography is now obsolete?
A. That's true, as well as the CV. There's been some changes.
MR. STENGEL: All right. Counsel, would you prefer to allow Professor Viscusi
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to substitute an update, or do you want us to just have him tell us now what should be added in terms of the CV and publications?
MR. WAGNER: Whatever's your preference. It might be faster for us to just provide you a substitute. I think an updated one was provided in one of the other cases. A disclosure was made in January or so, so...
MR. STENGEL: Well, let's --
MR. WAGNER: It may be faster for you to just --
MR. STENGEL: Counsel, if you can do that, that would be fine.
MR. WAGNER: Yeah.
MR. STENGEL: Let me just ask one question which I think --
MR. WAGNER: Sure.
MR. STENGEL: -- is necessary for today's proceedings.
BY MR. STENGEL:
Q. As to both the CV and your bibliography, are there additional items which are relevant to the opinions you're offering in Falise?
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A. Well, some of the forthcoming articles are now published, and I'm not sure whether they'll come up, but Article No. 210 on "The Governmental Composition of the Insurance Costs of Smoking," that deals with smoking. The "Tobacco Taxes," Article No. 206, is published. "Public Perception of Smoking Risks," No. 212, is published. "The Heterogeneity of Time-Risk Tradeoffs" Pertaining to Smokers," that's published. "The Perils of Qualitative Smoking Risk Measures," No. 216, is published. No. 221, "A Postmortem on the Cigarette Settlement," is published. And these are all cigarette-related articles.
Q. Right. Now, are there additional cigarette-related articles which are not on this bibliography?
A. The series of papers dealing with risk beliefs in Spain, but I don't think that that will come up.
Q. Well, I don't think the Falise plaintiff encompasses Spain --
A. Right.
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Q. -- but we may have to think about that.

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MR. WAGNER: I thought you excluded foreign.

Q. Let's look at the text of the expert statement itself. Turning first to what's numbered as Paragraph 5, you recite that, quote, "I will offer an expert opinion concerning the adequacy of the public's perception of the assessed risks of cigarettes."

What did you mean by "the public's perception" in that paragraph?

A. What is the general risk awareness of the public, including smokers, nonsmokers, of the risks posed by cigarettes as assessed by the scientific community.

Q. But when you say "public," that basically means the population of the United States? You're not trying to limit that to any particular geographic area or socioeconomic subset of the United States population?

A. I wouldn't limit it, but I do have information where I could make projections for specific demographic groups based on

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these data.

Q. All right. Now, you've used the term "assessed risks." What do you mean by that phrase?

A. Risks as estimated by, for example, the Surgeon General, so we don't know the true risks. We just have the best scientific evidence available in the confidence limits associated with it, and I'll run with the mean risk assessments by the Surgeon General as my reference point.

Q. All right. Is the Surgeon General's -- and I guess I should ask which Surgeon General's report you're referring to. '85?

A. '89 has most of them.

Q. All right. So what you've done is you've looked at the reporting in the '89 Surgeon General's report which presents the results of a number of scientific studies and taken that as a midpoint of the likely risk of cigarette smoking?

A. Plus I do relate it with additional studies by the National Cancer Institute, and these are all listed in my book, so it's the

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Surgeon General plus other governmental studies.

Q. But in part you use Surgeon General and governmental data because you're really not intending to do battle over what the actual risk of cigarette smoking is; is that correct?

MR. WAGNER: Object to the form.

A. I will use these as the reference point. Doesn't imply that I accept them as truth, but they will be the reference point I use for assessing the adequacy of risk

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perceptions.
Q. All right. Now, understanding that, you don't intend to offer an expert opinion that the Surgeon General is wrong as to their assessment of smoking risks, do you?
A. Nobody's asked me to offer an opinion on that. I think that these analyses by the Surgeon General could have refined by including other variables that are not included in these analyses.
MR. WAGNER: You just want to answer the question he asked.

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A. Yeah, but I'm not offering any alternative scientific estimates, and I'm not here to challenge any of the scientific estimates.
Q. And you, yourself, don't take issue with the idea that smoking is dangerous, do you?
A. No.
Q. You, in fact, describe smoking as a, quote, extremely dangerous consumption activity, closed quote?
A. That sounds like something I would have said.
Q. Now, in that paragraph you make a reference to -- and this is by way of your recital of our allegations -- "misconduct by the tobacco industry." Do you see that reference?
A. I have to get my glasses on. Yes.
Q. Have you reviewed any evidence that purports to be or is alleged to be evidence of misconduct by the tobacco industry as part of the formulation of your opinions in this case?
MR. WAGNER: Object to the form.
A. I have not reviewed the evidence prepared by

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the plaintiffs in this case regarding misconduct.
Q. All right. You thought you might have reviewed the Falise complaint, but you weren't sure? Is that an accurate statement of your testimony?
A. That's accurate.
Q. You may or may not know this, but the Falise complaint that was enforced when you were retained in and, in fact, submitted in your expert report was dismissed and a subsequent case was filed, same caption. But have you ever reviewed the Falise RICO case, which is the current complaint?
A. The amend -- it's called the amended --
Q. First amended complaint.
A. Yeah, first amended complaint, I have that, and I have reviewed that briefly.
Q. All right. When did you review that?
A. In the past week.
Q. All right. Further down in Paragraph 5 you make reference to three separate -- lung cancer risks, total mortality risks and life

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expectancy loss due to smoking. Could you
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tell us what you mean by each of those phrases?
A. Lung cancer risks would be whether people perceive either the risk of getting lung cancer or the risk of dying from lung cancer, depending on the survey. Total mortality risk would pertain to the total risk from all causes of premature death due to cigarette smoking. And life expectancy laws would pertain to the loss of life expectancy people expect to incur because of their smoking behavior.
Q. Is it your belief that you need a different survey instrument or set of questions to assess each of those issues?
A. Well, I don't think you need a different survey instrument, because I've done this within the context of a single survey instrument, and I saw no way to get at all three answers with one question.
Q. Just so I understand, I believe in some cases you have addressed -- and this is not perhaps the right technical term, but in the context of damage calculations a death
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benefit from smoking, the idea that because smoking leads to higher mortality rates, it may, in fact, reduce health care expenditures because you have people who are dying before they have need for health care. Do you intend to offer any opinion along those lines in this case?
MR. WAGNER: Object to the form.
A. Couple things. First, I've never referred to any of these things as a death benefit. Second, I've never offered testimony, either in deposition or in trial, regarding the magnitudes of the effects or whether cigarettes pay for themselves or do not pay for themselves. What I have done is offer testimony, if you are going to calculate these things, how do you go about thinking about it conceptually from an economic standpoint. So all of my writing in this area has been independent of the litigation. So it's been funded by the National Bureau of Economic Research and is not part of -- the actual estimates are not part of any cases that took place.
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Q. All right. So that's independent of what you've done in litigation?
A. Right.
Q. Oh, before I forget, in prior cases I saw references to your working with or through NERA. Is that still a relationship that's in place?
A. Yes.

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Q. And could you describe for purposes of Falise what role NERA has in your activities?
A. None.
Q. Do they provide a billing service for you, a past due mechanism?
A. No relationship from Falise.
Q. No relationship whatsoever from Falise?
A. None whatsoever.
Q. Is there any special reason that they're not involved in Falise --
MR. WAGNER: Object to the form.
Q. -- to your knowledge?
A. I didn't ask them to be involved would be one thing.
Q. That's a matter of free choice?

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A. Yes.
Q. In Paragraph 6 you recite that your opinions will focus primarily on lung cancer risk beliefs. And you say that's one of the principal smoking-related risks that has been linked by plaintiffs to asbestos exposures. Are you aware of the other diseases or medical conditions that are at issue in the Falise case?
A. I'm not sure of what other diseases are linked to cigarettes and asbestos jointly, which presumably is what the Falise case is about. I know that there is some disagreement between plaintiffs and defense as to what other diseases should be part of the case.
Q. Just to clarify this point, you've done no specific assessment of risk perceptions among those exposed to tobacco and asbestos as to asbestosis?
A. That's correct.
Q. And the same would be true as to pleural plaques or abnormalities?
A. That's correct.

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Q. 6 -- and I don't want to misdescribe by way of simplification -- I believe purports to recite the universe of data that you relied upon in rendering your opinion in this case, and it makes reference to the data which is reported in your book, Smoking, Making the Risky Decision, as well as a 1997 Audits & Surveys report and a '98 Roper Starch survey focused on Massachusetts. And we'll talk in more detail about what data is reflected in your book, but is that an accurate statement of the data sets you used with respect to your opinions in this case?
A. Yes, this covers all of them.
Q. All right. And correct me if I misunderstand the record, but as I understand the data sources here, your book relies on a 1985 Audits & Surveys survey and the data related to that survey, is that

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correct, among other things?
A. Among other things, I do use that data, so it's not so much relying on the report but taking the data itself and cranking out my own statistical analysis.
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Q. And you also rely on a survey conducted at your direction in North Carolina, and I apologize because I probably will get the date wrong, but it was in the early '90s, the '90, '91 period?
A. That's correct.
Q. Now, other than the '85 Audits & Survey data and the data from your North Carolina survey, are there any other survey data sets that you rely upon in your book?
A. I report the Gallup Poll results over time and various other sets of survey data.
Q. All right. Now, are you relying on Gallup data for your opinions in this case?
A. It depends on what comes up, but it does indicate that during a time previous to 1985 there was awareness of some of the risks of smoking.
Q. All right. Beyond the '85 A&S survey data, your North Carolina data, Gallup data, which the Gallup data was generated on a year-by-year basis?
A. Not every year, but --
Q. But close to it?
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A. Yeah.
Q. Any other survey data that you recall?
A. Well, it's not necessarily data, but evidence on advertising with respect to cigarettes that mentions adverse health implications, information on the number of Reader's Digest articles pertaining to cigarette risks. These are all quantitative things in my book that would pertain to creating a sense of risk awareness.
Q. All right. But those are -- just so we're on the same page, what I'm really looking for is data about information taken directly from individual smokers and then amenable to statistical manipulation as opposed to the number of publications, what the warnings were at various points of time, those sorts of things. I realize your book has a large number of other facts, but I'm really looking at surveys of individual smokers or individuals, because I realize nonsmokers may participate in these surveys as well.
MR. WAGNER: Object to the form.
A. The information we've talked about thus far
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covers the risk beliefs of smokers, so there's no other data in the book that I think pertains to that in terms of direct questions asked to smokers.

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Q. All right. You go on to mention the 1997 Audits & Surveys national survey?
A. That's correct.
Q. And the Massachusetts '90 survey by Roper Starch, and you had -- do you use those surveys or the conclusions of those surveys, or are you actually looking at the raw data in those cases as well?
A. Raw data.
Q. Do you place any reliance on the conclusions reached by the individual survey authors?
A. I don't know that they did reach any conclusions. They generated a series of tables.
Q. All right. Well, we have some things we'll need to have you identify out of your reliance material. I think that -- I think I now understand what your universe of data is, at least for this kind of data.
Did you have access to raw data

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from Gallup?
A. No.
Q. Were you aware before you began to work on your book of whether other organizations were doing surveys relating to smoking risk other than A&S and Gallup?
A. Roper also does smoking surveys that I've cited in other cases.
Q. Right. But other than the Roper Starch '98 Massachusetts survey, did you have access to any other Roper data on smoker risk perceptions?
A. Yes.
Q. And what data was that?
A. Like the Gallup data, national poll data, that was similar in character.
Q. Right. But in that case you had your survey results as opposed to the underlying raw data?
A. Right. I never had the raw data.
Q. Do you know if Decision Research was doing any work relating to surveys of smokers' risk perceptions?
A. By "Decision Research," you mean Paul

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Slovic?
Q. Well, someone doing business as Decision Research Corporation?
A. I don't know -- I don't keep track of any of the activities of Decision Research generally. I know the individual researchers.
Q. Okay. And I suppose at the time you wrote your book you had no particular interest in whether people were doing risk assessments as to those exposed to asbestos independent of smoking issues?
MR. WAGNER: Object to the form.
A. I wouldn't say that I had no interest in that. I'd say that I had no awareness that

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there were other researchers studying that issue.

Q. All right. Dropping to Paragraph 7, you report your conclusion on the relationship of risk perceptions as to lung cancer and estimated risk level calculated using data presented reports by the Surgeon General and evidence in the medical literature.

What medical literature do you

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refer to there?

A. It's -- the literature's all cited in my book. It's chiefly studies by the National Cancer Institute.

Q. All right. But you didn't go out and do new medical research to support your opinion in Falise; you're relying on whatever is in Smoking -- the book?

A. That's correct.

Q. All right. You make reference to broad demographic groups, and what's the basis on which you can identify demographic groups within the survey data available to you?

A. The '97 and the '98 surveys include information on the Respondent's educational level, and I've looked at the sensitivity of responses to different levels of education. I've also looked at how responses vary with gender, age differences, other factors, regional differences with the various surveys.

Q. All right. It is true, is it not, that until you get to the '97 and '98 surveys neither your North Carolina survey or the

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'85 Audits & Surveys survey asked for information about occupation, education or income level?

A. That's correct.

Q. You make reference at the end of Subset -- or Paragraph 7 to education levels similar to asbestos workers?

A. That's correct.

Q. What was the basis for your information as to the educational levels of asbestos workers?

A. Well, this is based on my general knowledge of what -- the types of occupations asbestos workers had based on work I'd done previously on asbestos issues. And since my results were similar for respondents who had not completed high school and for respondents who had completed high school but had not gone to college, I felt quite confident in saying this since it covered -- the responses were similar across all educational groups.

Q. Okay. Now, you made reference in that last response to work you had done previously

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relating to asbestos. To what were you referring there?
A. I served as a consultant to the U.S. Office of Management budget on asbestos, related compensation. I've written papers on asbestos, and I consulted in one asbestos case, but did not testify.
Q. And what was the nature of your consultation in that case?
A. Risk awareness issues of workers of the hazards of asbestos, and it was for Fiberboard.
Q. And when was that retention?
A. A long time ago. I would say a decade ago. I'm not sure, but over five years ago.
Q. And what was the basis of your assessment of asbestos worker risk perception?
A. Well, I never did prepare an expert report.
Q. Okay. And that was not a subject matter of things you were doing outside the Fiberboard retention?
A. I don't understand how that question relates to my answer, so could you either repeat the question --

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Q. Why don't we start over.

In any of your asbestos-related activity that you've just cataloged for us, did you have -- strike that -- did you make any effort to assess the general risk awareness of asbestos workers as it related to their exposure to asbestos?

MR. WAGNER: Object to the form.

A. I reviewed information that they received regarding the hazards of asbestos, but I never undertook or reviewed any specific survey evidence regarding their risk beliefs.
Q. So what you looked at were job site warnings, communications from their employers, those sorts of things?
A. As well as union publications, warning labels on products, things like that.
Q. All right. Let's turn to Paragraph 8 of your statement. You make reference to plaintiffs' estimate of the smoking attributable risk due to smoking? Do you see that reference?
A. Yes.

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Q. And what was your assumption as to what the smoking attributable risk due to smoking was, assuming an alleged synergistic effect with asbestos?
A. Well, I wasn't sure exactly what the reference point would be, so I had to make estimates of what I thought reference points might be based on the evidence in the literature, and there are three kinds of benchmarks you could use. One would be looking at evidence in the Surgeon General's

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reports and comparing that to evidence in the literature regarding the relative risk of lung cancer for asbestos workers as opposed to smokers more generally. A second source would be Dr. Selikoff's statements regarding overall lung cancer risks for asbestos workers, including cigarettes, most of whom were cigarette smokers. And finally, Dr. Harris's report which I got more recently regarding the overall risk of lung cancer. And in every case the estimates of the overall lung cancer risk were below 30 -- .37, or 37 percent, chance

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no matter how I approached it, so that the lowest estimate of the lung cancer risk perception, which was .37 for smokers in my samples, exceeded all the reference points that I had.

Q. So you didn't do any independent calculation of a smoking attributable risk reference point, you merely extracted them from various other materials?

A. That's correct. I did not reinvent the medical literature in some sense. I used the existing medical literature as my reference point and then with appropriate bridges made estimates of the smoking attributable risk.

Q. Now, you say smoking attributable risk due to smoking, so from that I presume you are taking the joint risk of smoking and asbestos exposure and in some way backing out that portion that you think is attributable to smoking?

A. No, I did not -- I'm not breaking things out in pieces, but even if we went with the total risk, my reading of the total risk is

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that the combined risk from all causes is still below 37 percent.

Q. All right. And 37 percent is the benchmark you derived from your survey work?

A. That's the lowest benchmark. All the rest of the benchmarks are higher.

Q. All right. And just so we're clear, I think it's probably obvious from prior answers, but your ability to compare a smoking attributable risk is limited to lung cancer, correct? You can't do that for asbestosis or pleural plaques?

A. I only looked at lung cancer.

Q. All right. Let's look at some data issues. Let me show you a number of documents, Professor. We'll mark as Viscusi 2 the book Smoking, Making the Risky Decision, as Viscusi 3 a document entitled "A Survey About Smoking," dated September 1985, as Viscusi 4, "Attitudes Towards Cigarette Smoking," dated February '97, and as Viscusi 5 a document entitled "An Assessment of

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Risky Behaviors in Massachusetts," dated December 1998. And so we do this in rough

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chronological order, professor, why don't you pick up Viscusi 3, which is the '85 Audits & Surveys document.

A. All right.

(Documents marked as Exhibits 2 through 5 for identification)

Q. Do you recall when you first received -- well, let me back up.

Did you receive this document with or before your receipt of the underlying data?

A. I obtained this document before I got the underlying data.

Q. All right. Do you remember when you retained -- excuse me, when you received it?

A. More when I found it. I found the document in the 1980s in the files at Jones, Day. It looked interesting.

Q. What were the circumstances surrounding your finding this document in Jones, Day's files?

A. I was advising with them or consulting with them on risk perceptions more generally, including cigarettes, but just how do people form risk beliefs, and they had compiled a

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bibliography of materials, boxes of articles on risk beliefs, and this was one of the things in the boxes, and this caught my attention because it looked like an excellent survey of smoking.

Q. All right. Now, I think you've told me you don't remember when in the '80s you first saw this. I would assume it's after September of '85 and before the publication of your book?

A. Yes. I would say it was '86, '87, somewhere in there.

Q. And do you remember specifically what Jones, Day lawyers you were working with at this point in time?

A. Barbara Kacir.

Q. All right. But your retention by Jones, Day at that point didn't relate to smoking?

A. It did, but I was not testifying in any cases. I was just talking to them about risk awareness issues.

Q. At the time you first saw this had you been retained as an expert witness in a smoking case by any tobacco defendant or their

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counsel?

A. No.

Q. When did that first happen?

A. I'm not sure when. I may have been named but never did any work before the State Attorneys General cases, but to the best of my knowledge, the first case in which I ever

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prepared an expert statement, was asked to prepare an expert statement, was deposed or testified would have been a State Attorney General case.

Q. Okay. Now, the document has a legend on the front cover that it was -- which says, quote, in anticipation of litigation, closed quote.

Do you see that?

A. Yes.

Q. I believe in other proceedings you've testified as to your understanding that the -- this was done in anticipation of the Cippilone case? Is that consistent with your understanding?

A. That was my understanding. I don't know if it's Cippilone or Chippilone, but --

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Q. Well, I've heard it both ways by people who should know.

When you found this -- and I believe you testified you saw it first listed in a bibliography and then actually looked at the document itself --

A. No. I saw it in a box of documents. They had compiled a -- it's the literature search on the risk beliefs, everything from smoking to, you know, risk beliefs of tornados, everything -- all -- everything they could find on risk beliefs.

Q. Well, after you saw this and reached the conclusion you gave us earlier about its potential utility, what did you do next?

MR. WAGNER: Object to the form.

A. I think I just asked for copies of this, as well as maybe 50 or so other articles. I thought it was interesting, but I saw a lot of things I saw -- that I thought were interesting. And I was in Cleveland at the time, and I had them shipped back. I was working through Northwestern. I had them shipped to Northwestern for me to review.

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Q. When you first saw this survey report, was there any material related to it, included with it, correspondence, data, drafts, et cetera?

A. No. This is all I recall seeing.

Q. Did you ask permission to contact Audits & Surveys to talk about this survey?

A. Eventually. I'm not sure -- it was not at that meeting, but after I got back to Northwestern I asked if I could have the data.

Q. You asked the lawyers, or you asked Audits & Surveys?

A. I asked the lawyers since they're the ones who paid for the data.

Q. All right. Now, at the time that you discovered this I presume that the results of this survey had never been published?

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A. And they were not used at trial, either, to the best of my knowledge.
Q. So these were confidential in the sense that they were sitting in lawyer's files and had never been disclosed to the broader public?
A. That's correct.
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Q. Do you know what the status of Cippilone, or Chippilone, was at the time you found this information?
A. I'm not sure whether it was over or still going on. I wasn't paying attention to the case. I just knew it was in the backdrop somewhere.
Q. Now, it's obvious, I think, from your prior answers, but you had no role in the preparation or conduct of this survey, correct?
A. That's correct.
Q. All right. So you took this document, among others, went back to Evanston, looked at it and decided you wanted to get access to the underlying data; is that correct?
A. That's correct.
Q. And who did you contact in the first instance to obtain the data?
A. Barbara Kacir.
Q. All right. And did she give you permission to get the data?
A. She said she would check. That's all -- she would check as to whether I could have the
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data since it was proprietary data, it's not a publicly released, you know, data set.
Q. All right. And what happened next?
A. Eventually I was sent the data.
Q. You had no further discussion about access? It just showed up on your doorstep one day?
A. Well, she may have, you know, called me the day before I was going to get the data, but she let me know I was going to get the data, and I got the data.
Q. What form did you receive the data? Was it electronic, hard copy, both?
A. It was a computer tape.
Q. And was there any correspondence or hard copy documentation with the tape?
A. No.
Q. Was there a data dictionary with the tape, or was there a data dictionary on the tape?
A. I had some sort of dictionary, better than this (indicating), so I had a hard copy data dictionary. Well, this may be it in the back.
Q. Okay. It may just be the copy we have, but what's been marked as Viscusi 3, if you turn
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to Appendix A, looks like it only has the first page of the survey questions. And by the time you published Smoking, Making the

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Risky Decision, you've obviously managed to obtain the whole set of questions. Do you remember whether you had a full set of questions when you first got this document?

A. Yeah, because Smoking, Making the Risky Decisions I just copied the survey, and we sent the photocopy in to the publisher, and they're the ones that reproduced it that way for the book.

Q. Okay. So you didn't have to go back and ask anybody specifically to get a copy of the survey questions?

A. No. I had the whole set of the survey questions.

Q. Did you -- after you got the data and with the survey questions in hand, did you ever have a conversation with anyone at Audits & Surveys about the survey itself and how it had come to pass, their reactions?

A. We didn't talk about how it came to pass. I knew how it came to pass. This wasn't a

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mystery. We did talk about how variables were coded, so we wanted to figure out how were missing values coded, et cetera, and also some of our results in terms of the analysis were not exactly the same as theirs, so then I wanted to make sure that we were doing it right and they were doing it wrong as opposed to vice versa.

Q. By that you mean when you actually took the '85 A&S data and began to look at relationships, you were getting different numbers than they reported in their summary?

A. Not on risk awareness. The risk awareness numbers were the same, but on -- just on some of the mentions and some of the other things we got somewhat different numbers.

Q. Did you ever discuss with them whether there had been different or prior versions of the survey questionnaire?

A. No.

Q. Did you ever have any discussions with anyone at Audits & Surveys as to your views as to the quality of the questions?

A. No.

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Q. Did you prior to your inclusion of the '85 Audits & Surveys data in your book ever seek anyone's permission to make public disclosure of that data?

A. Well, it's published in articles before my book came out.

Q. Articles by you?

A. Articles by me.

Q. All right. Did anyone else publish articles predicated on this data?

A. Not that I know of.

Q. Did you ever receive permission from anyone to make public disclosure of this data?

A. When I got the data, it was the idea that I

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could use it and write up my results for research purposes, so I don't have any formal permission. To date I have yet to get any formal permissions for any of the data sets.

Q. Do you know -- all right. This may have already been addressed. Do you know whether there is any testing of different question formats prior to the formulation of the final version, the '85 A&S questionnaire?

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A. No.

Q. Is that something you typically do in a survey setting?

A. You might want to run a focus group to see how people think about questions. Depends on the survey questions. Sometimes you pretest alternative versions. Sometimes you draft it based on people's responses. Sometimes it's clear how you would ask a question based on previous surveys.

Q. All right. Now, you've done consulting in the context of litigation repeatedly at this point in time, correct?

MR. WAGNER: Object to the form.

A. Yeah, I'm not sure what "repeatedly" means, but this is not my first deposition.

Q. That I understood. But you've been retained as a litigation consultant, testimony and otherwise, on prior occasions?

A. Yes.

Q. And you understood the significance of this being material prepared at the direction of counsel, did you not?

A. Well, back then I think I had only worked

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on, you know, one case in my life, so if you're talking -- as of 1985 I think the idea that I had been an expert repeatedly at that point was not the case.

Q. But you understand, as you sit here today, that if they chose to, these law firms could have maintained the confidentiality of this document and the underlying data?

A. Yes.

Q. But they chose to allow you to proceed with public dissemination of the data?

A. Yes.

Q. Was this survey -- I know we've talked about Roper and Gallup work. Was this the first survey data that you had seen which focused exclusively on perceptions of lung cancer risk and the accuracy of those perceptions?

A. Well, there's other surveys, the Gallup surveys, asking are cigarettes one of the causes of cancer of the lung, so it's come up in other survey contexts.

Q. But in this survey, specific requests are made for the respondents to specify on a numerical basis among a set of smokers how

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many they expect will suffer from lung cancer or another condition. Were you aware of any prior survey work that had attempted to quantify the respondent's risk perceptions in that fashion?

A. No.

Q. Is that something that you might have done yourself if you had not come across this data?

MR. WAGNER: Object to the form.

A. Well, it requires money to run surveys, so it's not clear that I would have funded a survey effort on my own, and when I eventually did do it, it was 1991 or so, and that was when I had more resources to do that sort of thing.

Q. Am I correct -- I'm turning to the third page of Viscusi 3 -- that the total respondents in this survey is 17,462? And I apologize, the copy we have is not a great one. It's at the upper left-hand corner of the third page of the document. It's the first page of the Tapio (phonetic) results.

(Witness reviews document.)

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A. Yeah. I'm not sure what that number is, whether it's a projection of some sort, but there were not 17,000 respondents to the survey.

Q. What do you recall the total number of the respondents to the survey being?

A. Well, my full sample is 3,119.

Q. All right. But you thought that was certainly a large enough sample to give you reasonably robust results?

MR. WAGNER: Object to the form.

A. Well, we can make tests of statistical significance with respect to the key variables I was interested in. They're valid, yes.

Q. All right. But just as a matter of practice is somebody who, at least a consumer of survey research on a regular basis, 3,000 respondents is a fairly large sample, is it not?

A. Unless you're trying to isolate, you know what's the probability of some rare ailment in a group, it's a pretty good sample.

Q. When you received the computer tape of the

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data, was it your understanding that you had all the data that had been generated from the '85 A&S survey?

A. Yes.

Q. Did you ever find out that that wasn't the case?

A. No.

Q. Did you ever have any discussion with anyone about the fact that if these survey results had been unfavorable, they would have been

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destroyed?
A. No.
Q. Now, looking at the questions asked by the -- strike that.
Again, if you look to -- and I apologize for the quality, and it's on several pages, so we probably could find a clearer one. This survey broke out respondents in the 16- to 21-year-old age category, did it not?
A. Yes, it did.
Q. All right. And it's talking about some things it doesn't ask. I think you've told me this, but just to make sure that it's
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clear as to Viscusi 3, which is the '85 Audits & Surveys survey about smoking, this survey had no request for educational level or other educational information?
A. That's right.
Q. And it had no income or occupational information?
A. That's right.
Q. No questions about asbestos?
A. None.
Q. No questions about asbestosis risk?
A. That's correct.
Q. No questions about pleural plaques?
A. None of those, either.
Q. All right. Does this survey purport to ask whether the Respondents' perceived risk is sufficient to make them want to stop smoking?
A. I don't think surveys have intents, which seems to be what you're saying.
Q. Okay. Well, the people that prepare the surveys have intents, correct?
A. All I know is they're trying to figure out what were people's risk beliefs.
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Q. All right. Do you know when this survey was actually administered, when the questions were asked to the respondents?
A. I assume it was 1985 since the report came in in 1985.
Q. All right. Do you know -- the survey breaks people into former, current and never smokers. Do you know how those three states of being are defined for purposes of this survey?
A. In which of the following categories do you fit, the current smoker, a former cigarette smoker, never smoked cigarettes?
Q. There was to requirement that to be a smoker you had to smoke over a certain level of cigarettes?
A. That's correct.
Q. In reviewing the data, did you come to believe there were any methodological deficiencies of this survey?
A. No.

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Q. And you, in fact, used this survey in both published articles in your book -- used the data, excuse me?

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A. That's correct.

Q. The next data source we discussed is your North Carolina survey, which I believe was conducted in 1991?

A. I believe -- I may have started the survey in '90, but I think '91 was the date I usually use.

Q. And I don't believe I've seen any kind of report generated as part of that survey process. Was there one?

A. No, I didn't have to provide a report because it was for me.

Q. All right. So to the extent there was a summary or report, it's reflected in your book?

A. That's correct.

Q. Did you on an interim basis publish any of the results of that survey, or were they appearing for the first time in the book?

A. First time in the book.

Q. I presume you had help in conducting the North Carolina survey?

A. Yes.

Q. Who was that?

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A. Graduate student research assistants. I don't remember their names.

Q. How many were there?

(Mr. Bschorr entered deposition room.)

A. There were a couple, but one was chiefly involved in making the phone calls.

Q. All right. Do you recall who that was?

A. No.

Q. Who designed the survey instrument for that survey?

A. I did.

Q. Did you seek the assistance or input of any of these graduate research assistants?

A. No.

Q. Did you base your survey instrument on that used in the '85 A&S survey?

A. Well, the purpose was to test alternatives to the 1985 A&S survey.

Q. And what alternatives did you test?

A. I experimented with different question phrasings regarding the risk beliefs pertaining to cigarettes.

Q. And those related specifically to the

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identification of the anticipation of how many individuals would become ill because of smoking?

A. Well, there were a lot of variations. I explored what if you die from lung cancer as opposed to get lung cancer, what about the

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total mortality risks, what about life expectancy effects, what about different ways to ask the lung cancer question.

Q. And did you keep track of the results of this experimentation with different forms of questions?

A. I did not keep a permanent log that I still have, but I did monitor the results of the experiments at the time, yes.

Q. And was there data reflecting these experiments, both numerical, resident on your computer, and textual, your notes or observations?

A. Well, I would have copies of the surveys that I would review. But this is pre-laptop, pre, you know, modern age of computers.

Q. Did you settle on a final form of

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questionnaire for your North Carolina study?

A. I did, which is the one that was administered.

Q. And how many respondents were involved in the 1991 North Carolina survey?

A. I'll have to check.

(Witness reviews document.)

A. Well, there were many respondents for different versions of the survey, but for the final version of the survey it was 206.

Q. All right. And were there similar sized pools of respondents for various iterations of the survey, or were those smaller groups?

A. They would be smaller -- one of the groups was 53 respondents -- or, no, there was 53 respondents that answered a particular question, but they were smaller than 200.

Q. And you're referring to Page --

A. 76 of the book.

Q. Of the book, which is Viscusi 2.

Once you employed the final version of the North Carolina survey instrument, I presume you captured the final data electronically?

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A. It was analyzed using a computer, yes.

Q. All right. And you still have the data from that survey?

A. No, not that I know of.

Q. All right. So that survey survives only in the summary form reflected in your book?

A. Yes.

Q. I ask you whether you published any articles before the book using the North Carolina survey. Did you ever afterwards?

A. Shows up in lots of my articles.

Q. But not a specific treatment of the results of the '91 North Carolina survey?

A. Not with any more detail than is in the book.

Q. That was really the essence of my question. So that whatever detail in '91 exists is in

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Smoking, Making the Risky Decision?
A. That's correct.
Q. Now, let's talk about the questions you employed in the North Carolina survey. You experimented with some of the attributes as to identification of lung cancer risk, but you, in essence, retained the basic
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structure of the '85 A&S survey instrument, correct?
(Ms. Phillips left deposition room.)
A. Well, I'm not sure what you mean by "basic structure." We're only talking about one question that's similar, and the rest of the survey's all different, so I don't think it's the same structure at all. So I'm not sure what it means to have the basic structure.
Q. Okay. But what -- let's go back.
We don't -- we can't speak to the intention of those who prepared the '85 instrument because it wasn't you. We can talk about your purposes in undertaking the '91 North Carolina survey. What were you hoping to explore or investigate?
A. I was hoping to explore how alternative ways of asking the risk belief question would affect their risk assessments.
Q. And did you come to a conclusion in that respect?
A. Yes, which is that, first of all, the way it
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was asked in the '85 Audits & Surveys question was a natural way for people to think about it, and second, expanding the scope of the survey to include mortality and life expectancy strengthened the results.
Q. And those had not been part of the '85 questions, correct?
A. That's correct.
Q. Did you seek any funding or grants so that you could undertake a broader survey based on your '91 North Carolina survey instrument?
A. No.
Q. You were satisfied that you had answered the specific question you were investigating?
A. I explored the robustness of the findings and concluded that, yes, these findings were robust, and I could confidently put that in the book.
Q. As a general proposition professor, it is true, is it not, that when individuals are offer -- or asked to provide numerical estimates, there is a recognized tendency for them to round to the nearest five or 10?
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A. I'm not sure that that's a general proposition.

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Q. But you've seen that in literature?
A. I would be happy to look at articles that make that claim, if you've got any.
Q. And if that is, in fact, a recognized effect, then that would have a potential impact on particularly low numbers in terms of risk estimates?
A. I see no reason why this purported effect should impart any bias to the results whatsoever.
Q. And are you aware of any statistical methods or calculations which can be used to eliminate any bias which may be introduced by that tendency on the part of respondents?
(Ms. Phillips entered deposition room.)
A. I don't have any reason to believe that there is any bias, so I'm note sure what it -- so, first of all, we're talking about a bias that we don't even know exists, and we don't even know that it's something that
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has to be fixed, because even if people round, we don't know that that imparts bias.
Q. Okay. Let's turn back to your book on smoking. I take it that --
MR. WAGNER: Jim, can I interject?
MR. STENGEL: Sure.
MR. WAGNER: Can we go off the record for one second?
MR. STENGEL: Sure. Is now a good time for a break? We've been at it for a while.
(Discussion off the record.)
(Recess taken.)
THE VIDEOGRAPHER: The time is 11:14. We're again on the record, the beginning of Video Cassette No. 2 of the deposition.
MR. STENGEL: During the break I contacted my office and should have clean copies of Smoking, Making the Risky Decision, which is Viscusi 3, available this afternoon which we can substitute.
Q. I only have one other question on the book
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at this point, Professor Viscusi.
MR. NEMSER: Just for the record, Jim, I think it's Viscusi 2.
MR. STENGEL: Is it Viscusi 2? Excuse me. You're right.
Q. The book cites a variety of medical literature relating to the health impacts of smoking. Had you prior to preparation of the book undertaken any kind of systematic review of the medical literature related to lung cancer and smoking?
A. Well, I did this as part of my articles.
Q. At this time, which is, say, 1992, had you

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read any of the Selikoff or Selikoff and Hammond studies relating to asbestos?
A. I don't recall when I read them.
Q. All right. They're not cited in your book?
A. They're not.
Q. Let's turn to --
A. They might be in my '83 book, another book that I think cites them.
Q. Let's turn to the '97 Audits & Surveys work I believe we marked as Viscusi 4.
(Witness reviews document.)

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Q. Professor, have you seen this document before today?
A. Yes.
Q. And could you describe it for the record?
A. Audits & Surveys ran a survey on smoking risk beliefs nationally in 1997, and this is a summary of some of the tables they generated.
Q. Okay. And this survey was conducted at the direction of Arnold & Porter and Jones, Day?
A. They funded it.
Q. This shows a February 1997 date. Are you aware of any Audits & Surveys survey work done between the '85 report we've been looking at and this one?
A. No.
Q. Okay. What was your involvement, if any, in the preparation or conduct of the 1997 Audits & Surveys survey?
A. Basically my questions from the '91 survey were incorporated in the '97 survey, with some modifications by Audits & Surveys, but beyond that I don't have no involvement.
Q. When you say your questions were

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incorporated, were you part of the process of the formulation of the survey instrument in this survey?
A. No.
Q. How did your questions regarding risk perception come to be included in their survey?
A. I believe a lawyer gave a copy of the revised questions out of my book to Audits & Surveys and asked if they could be incorporated in a national survey to test the, I guess, robustness of the '85 findings.
Q. All right. But did you have any personal contact with anyone at Audits & Surveys with respect to the preparation of this report?
A. None.
Q. Did you have -- you never saw a draft of the survey questions?
A. No.
Q. Do you know who at Audits & Surveys was responsible for the preparation of this survey?
A. No.

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Q. All right. And how do you know that a lawyer took your questions out of your book and gave them to Audits & Surveys?
A. That's what he told me he did.
Q. But that's your involvement such as it was in the '97 Audits & Surveys work?
A. Yes.
Q. Did you have any discussion with anyone before February of 1997 about the desirability of the conduct of another Audits & Surveys survey?
A. No.
Q. Were you aware that this survey was going to be performed before it was?
A. No.
Q. When did you first become aware of the fact of this survey?
A. After it was run.
Q. Did you become aware by seeing the final report, or someone informed you that it had been run?
A. He informed me it had been run and said he would be sending the final report.
Q. When you got the final report, did you also
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receive the underlying data?
A. Yes.
Q. And in what form did you receive the underlying data?
A. Probably computer disk of some sort.
Q. All right. To your knowledge, was the data you received complete?
A. Yes.
Q. Did you ask to see any of the sort of raw survey questionnaires, that is, the forms actually used by the people conducting the survey?
A. No.
Q. Did you ever do that as a check on the accuracy of the electronic data?
A. I believe I have copies or had copies of the chunk of the survey pertaining to this, as well as questions pertaining to other matters such as, do you own a PC, so I did have a copy of the text as opposed --
Q. You had a copy of the -- one copy of the text, so you knew the instrument, as opposed to having all the --
A. Marked up surveys.
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Q. -- marked up surveys?
A. Yes.
Q. All right. So you did not have the marked up surveys?
A. No, I did not.
Q. All right. Do you ever look at marked up surveys again as a check on the accuracy of the data collection process?
A. I generally don't. I assume that if you're

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hiring a recognized research firm, they would code things out correctly. Now, one exception to that would be if you had an open-ended memory recall question and you wanted to figure out how to code something, then I would look at the data, and often I would participate in the pretest or focus groups ahead of time to figure out how to head up a qualitative question like that.

Q. Now, after you received the report and the data, did you have any discussions about this survey with anyone at Audits & Surveys?

A. Yes, I did talk to them about how different variables were coded, things like that, things of a computer nature.

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Q. When you received it, was it your expectation that you would be able to use this information to publish academic articles or as a retained expert in litigation?

A. I was given the data to do with what I wanted. I would not be paid for anything I did with the data, but I was -- "Here's the data. You can do with it whatever you want."

Q. As of February 1997 were you then currently retained with respect to any tobacco-related litigation?

A. I'm sure there was something ongoing.

Q. Did you have any conversations with anyone at Arnold & Porter or Jones, Day relating to the '97 report and data?

A. Yes.

Q. And what was the nature of those discussions?

MR. WAGNER: Object to the form.

A. Mostly it was discussing, "Here's the data that we obtained. Here's a copy of the report," and I was allowed to use the data.

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I mean, there was not much to it.

Q. Not much to your communications?

A. There was not detail beyond that, that I recall.

Q. All right. Who were you dealing with at Arnold & Porter and Jones, Day at this point in time?

A. Nobody at Jones, Day. It was Tim Atkison at the Denver office for Arnold & Porter.

Q. Okay. Now, do you think you received this near in time to February 1997?

A. Yes.

Q. And what did you do when you received the report and the data, you personally?

A. Well, I looked at it and noticed that the conclusions or the results were similar to those that I had gotten with my 1991 survey.

Q. Did you see any methodological problems with this survey?

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A. The survey itself was fine. As for the analysis, I do my own analysis rather than relying on theirs, so I would not rely on their tables as opposed to my own raw

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tables.

Q. All right. Now, this, at least the report, recites that the interviews were conducted on February 7th and 9th, 1997?

A. That's correct. Or 7th through 9th.

Q. And that they employed or utilized a sample of 1,013 adults?

A. That's right.

Q. Did you do any analysis of whether that sample size was adequate to support the conclusions reached in the report?

A. Well, I don't know what conclusions they reached, but it was adequate for my purposes.

Q. Okay. And that was -- for your purposes that included making some assumptions about how the public, as we discussed it previously, assessed risks of smoking, correct?

A. I was making estimates, not assumptions, so I was making estimates of their risk beliefs.

Q. But your estimates, in your view, apply not to just the roughly 1,000 adults surveyed

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here, but you believe those results can be applied to the adult population in the United States?

A. I can make estimates for the adult population based on controls for region, educational mix and similar factors, yes.

Q. If we look at the questions themselves -- and just as one point of clarification, who are Bruskin & Goldring?

A. I believe this is a company that handles phone calls for survey firms, so they worked with Audits & Surveys to actually make the calls.

Q. Okay. In your view -- and I'm looking at the first page of the questionnaire, and I'm focusing on items labeled 2 and 3. If in response to the second question the respondent did not know or could not provide a precise number, 2A suggests that the interviewer ask a follow-up question which starts, quote, Just your best estimate will do, closed quote?

A. That's correct.

Q. Is that methodologically appropriate, in

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your view?

A. Oh, yes, because people may think, based on the first question, that this is a quiz question when they have to know the exact numerical answer, and they may not know the

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exact number, but we want people to report their best estimate. So that's exactly, I think, what you should do, and I do it often in my surveys.

Q. This survey, unlike the prior A&S survey, does ask questions about income, correct?

A. No, I didn't see income questions. Maybe we do education questions. Oh, we do have income. I'm sorry, we do have income level.

Q. Did you -- were you consulted at all as to the desirability of having income data collected?

A. I wasn't consulted about any aspects of this survey.

Q. If you note, Professor, the age ranges in the '97 A&S survey are slightly different. They ask those 18 and above. Do you see that?

A. That's correct.

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Q. And the '85 survey polled those down to 16. Do you recall that?

A. Yeah, I do.

Q. And, again, I assume you had no role in the decision to eliminate the underaged smokers from the survey?

A. That's correct.

Q. It is correct, is it not, that like the prior A&S survey, unlike your '91 North Carolina survey, this survey asks no questions about perceptions of asbestos-related illness apart from those that are also related to smoking -- strike that.

They ask no questions about asbestosis?

A. That's correct.

Q. And none about pleural plaques?

A. That's correct.

Q. And there are no questions that specifically address the issue of synergy?

A. That's correct.

Q. In what publications have you used or employed the data from the February '97 A&S

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survey?

A. Duke Law Journal it appeared. It was also going to be in a book presented at a conference in Switzerland and was going to be in the book, but I -- they just came out, but I decided to hold it out and put it in my book instead so that it's also going to be in a book I'm writing on cigarettes. But thus far Duke Law Journal. May also be in the Cumberland Law Review, I'm not sure, but it is in the Duke Law Journal.

Q. Between the '85 and '97 Audits & Surveys surveys, did any other organization -- and I'm leaving out your North Carolina survey -- conduct a survey which was directed at the same issue of smoker risk

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perception, using this numerical scaling of how many people you think will become ill among a fixed number of smokers?
A. None that I know of.
Q. Do you know approximately how much it would cost to conduct a survey of the scope of the 1997 A&S survey?
A. Five figures. I'm not sure how much, but
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under $100,000.
Q. Okay. And do you know what litigation, if any, this was prepared for?
A. The State Attorney General suits. It wasn't prepared for litigation I think so much as just a cross-check on the '91 survey results, so I guess in that sense it was litigation related.
Q. The '91 survey results being your --
A. Mine.
Q. -- '91?
A. That's correct.
Q. Have you relied on this study in any testimony you provided in tobacco-related litigation?
A. Yes.
MR. WAGNER: Object to the form.
Q. And which ones would those have been?
A. Well, I've relied on my analysis of the data as opposed to their report --
Q. Okay.
A. -- in numerous state cases since then, in Ohio ironworkers, and I'll continue to rely on it in all the active cigarette cases.
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Q. I don't know that I asked you this. Did you have any funding sources for your '91 North Carolina survey?
A. No.
Q. And what was the approximate cost of that survey?
A. Well, in one sense, it was free in that the calls were made -- you know, they're local calls, and I was using my graduate research assistants, who I paid for and would have paid for anyway, so I -- a couple of research assistants that worked with me. So they were paid, but I would have to pay -- I would have paid them for other research products had they not worked on this.
Q. And you, yourself, have conducted no independent survey between your '91 survey and the '97 A&S survey?
A. Well, I've done a number of surveys in which smoking came up, but the question was not pertaining to smoking risk beliefs, so it had to do with smoking and other things.
Q. Such as?
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A. Attitudes toward environmental risks. So

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different contexts in which cigarette smokers may behave differently.

Q. All right. And you refer to cigarette smokers and this sort of data and some of your publications about competing sources of risk information?

A. Right.

Q. But those -- none of those surveys or experiments were focused at the issue of risk perception as it related to smoking --

A. That's correct.

Q. -- per se?

Let's look at the Roper Starch December 1998 survey. I think it's Viscusi 5. When did you first become aware -- I'm sorry, strike that.

For the record, Professor, could you identify this document?

A. Roper Starch ran a survey of risk beliefs in Massachusetts pertaining to smoking, and this is their report on their survey.

Q. And when did you receive this?

A. Probably either December '98 or January '99.

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I don't know which.

Q. Do you recall how you obtained a copy?

A. It would be sent to me by Mr. Atkison.

Q. And that was a gentleman at Arnold & Porter?

A. That's correct.

Q. Did you have any role in the formulation of the survey instrument for the Roper Starch survey?

A. Yes.

Q. And what was that role?

A. So he was not involved at all. It was just me working with the people at Roper Starch to develop the survey.

Q. And what did you do to help the Roper Starch personnel develop the survey?

A. Well, we talked through the different questions that would be included in the survey, the order of the questions, things of that nature, so we developed the survey instrument that was at the back.

Q. You include references to seat belt use in this survey as well as tooth flossing. Why are those questions included?

A. Mostly it's like good data for my own

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research. I found that cigarette smokers in general differ from the rest of the population in terms of their safety-related practices. And I found, for example, cigarette smokers are less likely to be concerned about risks in other contexts, so seat belt use, whether you floss your teeth, how careful you are with your diet. These are all things in which smokers differ systematically from nonsmokers in the population.

From a research standpoint such

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questions are often useful to explore differences in risk taking across smokers and nonsmokers, as well as to assist me in my econometric analysis of smoking behavior. Lots of times you need other variables that are proxies for attitude toward risk in the analysis, and that's what these variables do, they serve as proxies for attitudes toward risk.

Q. What role, if any, did you have in the actual conduct of the Roper Starch survey?

A. I didn't make any phone calls, but once you

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have the survey instrument and hand it over to a telephone -- I was involved in everything up to handing a survey instrument over to the telephone interviewer, so that would be my role.

Q. All right. And this survey is geographically limited, correct?

A. To Massachusetts.

Q. Right. And that is obviously different from the Audit & Survey surveys. Did you have a view as to whether it was necessary or desirable to conduct a survey limited to Massachusetts?

A. Well, this is for the Massachusetts Attorney General's case. So if you wanted information specific to Massachusetts and that also oversampled the Medicaid population in Massachusetts, then you'd ask the questions in Massachusetts.

Q. So you thought it was important in this context to focus your sampling on the population at issue in the Massachusetts AG case?

A. Our intent was to only use this survey in

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one case. I could have made estimates based on the '97 case that would also be pertinent to Massachusetts, but since we had the resources, we decided to get -- run a survey in Massachusetts to obtain information directly on their risk beliefs and specifically on the Medicaid population.

Q. Okay. So this was sort of subpopulation focused survey?

A. It got everybody, but the Medicaid population was oversampled.

Q. Okay. And by "oversampled," what do you mean?

A. More than their demographic representation. If you did a random call of the population, we would not get enough Medicaid recipients in the sample, so that Question 2 which leads off this thing, you know, finds out, you know, do we have enough Medicaid people in the sample, so we're trying to get enough Medicaid people, so...

Q. And the inclusion of a question about cigarette smoking causes flat feet is for

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what purpose?
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A. It catches a lot of things, so it would capture people who have negative attitudes towards cigarettes generally and are willing to blame cigarettes with everything, and it also may capture people who are not taking or -- the survey instrument seriously or are not paying sufficient attention to the survey question. So it gets a lot of things, but in general, it gets people for whom their risk beliefs responses may not be accurate reflections of how they really feel about the risk. We don't really know what's going on with those people.
Q. The sample size in the Massachusetts survey was 1,002; is that correct?
A. That's right.
Q. And you viewed that as being adequate for the purposes of this survey?
A. Yes.
Q. There's a chart which appears at Page 3 of the Roper Starch report which purports to show sampling tolerances. Do you see that, Professor?
A. Yes.
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Q. That's a fairly typical analysis of sample size and sampling error, is it not?
A. I don't know if it's typical. I always do my own analysis, so...
Q. But you look at that question of whether your sample size is adequate by employing various statistical measures?
A. Yes, I do.
Q. And that's what a competent statistician will do with any kind of sampling, correct?
A. Yes.
Q. Did you get all the underlying data from this survey?
A. I believe I did.
Q. And what, if anything, did you do with that data?
A. I've done a number of analyses just to try to replicate the kinds of tables I've generated on cigarette smoking risk beliefs for smokers and nonsmokers from various questions, variations with educational group, et cetera.
Q. Did you testify in Massachusetts?
A. There was no trial.
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Q. Did you give a deposition?
A. I don't know whether I was deposed in Massachusetts individually, jointly with the State of Washington or not at all, so I've been deposed in Massachusetts for State Attorney General cases, but I forget which cases they pertain to.
Q. All right. Because I know you've been

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deposed in Washington.
A. Right.
Q. You understand that deposition was applicable to more than one state action?
A. I don't -- I didn't keep track.
Q. What was the last time you testified, either in court or in deposition?
A. Probably last month.
Q. In which --
A. April.
Q. -- case?
A. Personal injury case in St. Louis, Missouri.
Q. Have anything to do with tobacco?
A. No.
Q. When was the last time you testified either in deposition or trial in a tobacco case?
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A. Deposition, wintertime, January, I think, maybe December, I don't know, but I was stuck in New York by a snowstorm. And that was a tobacco case, individual case.
Q. Were you testifying about survey results in that case as well?
A. Yes.
Q. What law firm or firms retained you in that case?
A. Chadbourne Parke, I think, Los Angeles, out of Los Angeles.
Q. Would you turn back to the Roper Starch survey? This purports only to seek responses from respondents over 18; is that correct?
A. Yes.
Q. Was it your decision that the use of individuals below 18 were not relevant?
A. By 1992 the legal age for smoking had been increased in most states to around 18, so by 1998 18 was the legal age for purchase for cigarettes in Massachusetts, so the focus of the survey was on risk beliefs of people for whom purchase of cigarettes was legal, so
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that's the reason for the choice.
Q. You have as part of the survey questions at Page 7 a list of occupations. Do you see those?
A. Their Page 7?
Q. Yeah, it's the -- it's an attachment to the Roper Starch survey.
A. Okay. I see it.
Q. Do you know who developed the coded list which appears at D1?
A. This is a -- was a standard block that Roper Starch had, that they used in other surveys.
Q. Do you have a different standard block as to occupation that you would employ in other surveys?
A. Well, without knowing how these things differ, I would just take the Bureau of Labor Statistics categories, would be the way I'd do it.

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Q. And it's typical to -- I presume since there's a blank for occupation, the respondent may have given you something specific that was not on the list, and then the person conducting the survey would make

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a decision as to which of those codes was appropriate?

A. That's correct.

Q. And this survey asks no questions about asbestos, correct?

A. That's correct.

Q. Did you -- strike that.

Was this survey disclosed in the Massachusetts Attorney General litigation?

A. I don't know who discloses what, but I would assume it was.

Q. But you were -- as with the other surveys, you feel you're free to use this publicly for academic purposes?

A. Yes. And I am doing that.

Q. All right. And no one told you anything to the contrary?

A. That's correct.

Q. When we were talking about seat belt use and use of dental floss, you made some comments about the differences in -- I don't want to misstate your comment -- about how smokers as a group perceive or react to perceptions of risk. Do you recall that?

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A. I didn't say smokers differ systematically in risk beliefs, they differ systematically in their risk taking behaviors.

Q. All right. With that amendment, what's the basis for your belief in that regard?

A. I've published articles using various data sets showing that cigarette smokers are risk takers in a variety of domains, not just smoker -- not just smoking. I would be happy to go into these, but, you know, that sort of thing.

Q. All right. And how from a methodological perspective have you attempted to assess those differences in behavior?

A. Well, the first paper looked at the additional wage compensation smokers receive for hazardous jobs, and smokers are willing to accept additional risks on the job for less additional money than nonsmokers are. I have more recent papers showing that cigarette smokers are less likely to floss their teeth, their seat belt use differs from nonsmokers, they're more likely to work on more hazardous jobs, within any given

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type of job they're more likely to be injured, controlling for the riskiness of the job, they're more likely to be injured at home. So they're systematic risk takers

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across a wide variety of domains.
Q. And those publications are in your attachment to your CV?
A. All those issues are covered in things that have been published, although I have new publications that do a better job on those topics.
Q. Those are publications in process?
A. Under review, but all the issues are covered -- everything I've said I can document with things already published.
Q. Okay. And do you rely on any of the survey materials we've looked at this morning to support your conclusions as to the risk taking propensities of smokers versus nonsmokers?
A. No.
Q. Looking at the '98 Roper Starch, the '97 Audits & Surveys, your '91 North Carolina survey and the '85 A&S survey, and

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recognizing that we're talking about the underlying data, not the reports themselves, is that the full extent of the survey data going to perceptions of smoking risk that you will rely upon in the Falise case?
MR. WAGNER: Objection. Asked and answered.
A. Once again, I don't know that I would rule out National Public Opinion Poll data, for example, as something I would rely upon.
Q. Okay. But with that proviso, is that an accurate statement?
A. I believe so.
Q. Let me ask you some questions about -- and I apologize, I thought we would get through lunch -- some additional reliance material produced to us.
MR. STENGEL: Give me about two minutes just to get this.
THE VIDEOGRAPHER: Do you want me to stop the video?
MR. STENGEL: Yeah, that's not a bad idea.
THE VIDEOGRAPHER: It's 11:51.

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We're off the record.
(Discussion off the record.)
(Recess taken.)
(Document marked as Exhibit 6 for identification)
THE VIDEOGRAPHER: We're again on the record. The time is 12:02.
Q. Professor Viscusi, I'll show you what I've marked as Viscusi 6, and there are some cover pages which are probably extraneous, but that's the way we got the document, which I think the substantive document actually appears three pages later, which is an OSHA hearing transcript, at least portions thereof. And that transcript is

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dated June 1, 1978. Have you seen this document before, Professor?
A. Yes, I have.
Q. And when did you first see this?
A. I think Monday of this week.
Q. All right. Is this something you requested?
A. Not this specific document, but I did request any other information pertaining to the lung cancer risks of asbestos workers
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that was in the literature that would be pertinent to assessing what the scientific reference point would be.
Q. All right. So this went to your question of how you would compare the -- what, from our perspective, is the synergistic risk with the sort of measured risk perception in your survey samples?
A. Well, it would be comparing total risk of lung cancer for asbestos workers to their risk beliefs associated with cigarettes.
Q. All right. But you posed a question to counsel, and this is what they provided you?
A. That's correct.
Q. You did not specifically ask for the June 1, 1978 OSHA hearing transcripts?
A. That's correct.
Q. At the top right-hand corner of the page there's a designation in handwriting which says "DDCIT Asbestos Smoking." At least I believe that's what it says.
A. I see that.
Q. Is that your designation?
A. I didn't write that.
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Q. All right. That was on the document when you received it?
A. I'm not sure my document has this.
Q. All right. Did you have any discussions of this document with counsel after you received it?
A. Yes, I have discussed the document.
Q. And what was the substance of this discussion?
A. Well, we walked through the document after I had read it and focused on some of the key passages as they related to what Dr. Selikoff said.
Q. If you look at, I think it's Transcript Page 1704, the last paragraph on the page, Dr. Selikoff is speaking as to what I will probably non-technically refer to reversibility. Do you see that statement?
A. Where on Page 1704 is this?
Q. Yes, it bears the Production No. 4240 in case we've got multiple pagination going.
A. Right. And what line?
Q. The line 15 through 25.
(Witness reviews document.)
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A. All right.
Q. This speaks to the fact if you're a smoking asbestos worker and you quit smoking, you reduce perhaps substantially your health risk, at least of lung cancer. Were you aware of that fact?
A. There have been Surgeon General's reports that have pointed it out that stopping smoking reduces your risk of lung cancer.
Q. Do you have any empirical basis to assert that individual smokers would be aware of that fact?
A. That quitting smoking now reduces your risk? This has --
Q. Correct.
A. This has been an ongoing theme of the public information campaigns regarding smoking. This is one of the major themes.
Q. But you've never assessed that awareness by way of a survey document?
A. I've never run a survey asking that question.
Q. Thank you.
What did you feel you needed to
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know about at least Dr. Selikoff's views on the synergy reference -- synergy risk reference point that this document addressed that you didn't know at the time you made request to counsel?
A. I don't think the request was generated by so much as of a lack of knowledge as a desire to have at my disposal the information that existed in the literature pertaining to the overall lung cancer risk of asbestos workers, and my desire was not to focus on synergy versus no synergy, just to find out what is the overall lung cancer risk from all causes.
(Document marked as Exhibit 7 for identification.)
Q. All right. Let's look at what I've marked as Viscusi 7, and, again, this was produced to us as reliance material.
(Witness reviews document.)
Q. I don't know -- I mean, if you want to read it, that's fine. Just let me ask a preliminary question. Have you seen this document before today?
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A. Yes.
Q. And where did you get this document?
A. Winston & Strawn sent it to me. I'm not sure who there put it in the mail, but...
Q. Do you remember when they sent it to you?
A. I would have gotten this this Monday.
Q. All right. And is this in response to a request that you made?
A. Yes.
Q. The same one we've been discussing as with respect to the other document?

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A. Yes.
(Document marked as Exhibit 8 for identification.)
Q. Let me show you what we've marked as Viscusi 8, and for the record, Viscusi 8 is an article entitled "Asbestos Exposure, Cigarette Smoking and Death Rates" by Hammond, Selikoff and Seidman.
Have you had a chance to look at the document?
A. I see it, yes.
Q. Was this something provided to you by Winston & Strawn?
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A. Yes.
Q. Did you receive this on Monday?
A. No. I think I had this earlier.
Q. Do you recall how much earlier?
A. I don't remember whether I had this initially. They've been sending me materials, you know, since last October, so I've gotten maybe five shipments of things.
Q. All right. And you don't keep track of when things come into your possession?
A. No. I take them out of the envelope and just make one big pile.
Q. All right. There's a handwritten notation in the upper right-hand corner of the first page of the document, and I won't even attempt to read that. Is that your handwriting?
A. No.
Q. Okay. And you don't know who put that on the document?
A. No.
Q. Did you specifically ask that Winston & Strawn send you this article?
A. I did not specifically request this paper.
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Q. Okay. Have you made any request of Winston & Strawn to send you all extant asbestos and smoking epidemiology?
A. No.
Q. Do you consider yourself an epidemiologist?
A. I do risk analysis in various contexts. I actually teach a course in scientific evidence, but I am not an epidemiologist.
(Document marked as Exhibit 9 for identification.)
Q. Let me show you what we've marked as Viscusi 9, which, for the record, is an article entitled "Synergy Between Asbestos and Smoking on Lung Cancer Risks" by Erren, E-R-R-E-N, Jacobson and Pickarski, P-I-C-K-A-R-S-K-I.
A. I see it.
Q. Is this a document you received from Winston & Strawn?
A. Yes.
Q. And do you recall approximately when you received it?

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A. That would be this week for this document.
Q. Okay. Did you have any discussion with
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Winston & Strawn about this document?
A. The only discussion related to Table 3, just pointing out here the various studies of the relative lung cancer risks. I believe that was the main thing that came up.
Q. All right. Did you give any consideration to whether the estimate of S, I think it's a sub PI gives you a reference point for comparison with purported cancer risk perceptions in your survey populations? I'm looking at the last two paragraphs of the article.
A. Well, I haven't read the article. I've browsed through it. So I'd want to read the paper more than I have as far as actually going to --
Q. That's fine.
A. -- give it a blessing for --
Q. Just so I understand --
A. -- some purpose.
Q. -- you're not suggesting you had read it at that level and don't recall, now you're saying you hadn't read it at that level when you first received it?
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A. I don't know what -- I don't even understand your question.
Q. Okay. Well, let me withdraw the question.
When you reviewed this article when you first received it on Monday, your primary focus was just reviewing Table 3 and the range of relative risk estimates that are reflected there?
A. In the abstract, just glancing at it to see what the range was in the literature.
Q. But you didn't sit down and study the text of the article itself?
A. No, I did not.
Q. Do you have any basis to disagree with the author's conclusion in the first sentence of the article, that, quote, Epidemiological studies have confirmed that both tobacco smoke and asbestos fibers are potent human carcinogens, closed quote?
A. No, I have no reason to disagree with that.
Q. Do you have any requests for information to Winston & Strawn that they have not responded to today?
A. No.
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Q. Have you reviewed the reports of any other defense experts in this case, "this case" being Falise?
A. I believe so. I'm not sure which experts go with which cases. I have reviewed defense experts, yes.
Q. And which ones were those?

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A. Jeffrey Harris. Is he in Falise?
Q. Yes, but he's not a defense expert?
A. Oh, I know. Other defense -- I'm sorry, defense experts.
Q. That's a confusion I suffer with, but that's...
A. I think Sheffman's report would be the only one I've reviewed. No, there's also a historian. Martin?
Q. Kirby Martin, yes.
A. Those are the two that come to mind right now.
Q. Have you met with Frederick Dunbar with respect to Falise?
A. No.
Q. William Wecker?
A. No.

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Q. Dr. Mundt?
A. No.
Q. You mentioned you've reviewed the Jeffrey Harris report. Actually, I think there are five Harris reports at this point. Do you -- have you reviewed all of them?
A. I have at least four of them, and I've read them in different levels of detail since I also got these -- some of them I had before, they've come in in various stages, but I did not have the complete set till this week, but I had a couple of them before this week. But as of now I think I've -- well, I have like four any way.
Q. All right. You're a full-time faculty member at the Harvard Law School right now, correct?
A. That's correct.
Q. With respect to your work as a consultant here, do you have a student research assistant or anyone else helping you?
A. Nobody's working on my consulting. There are people working on my tobacco book. I work with -- on other tobacco matters I do

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have somebody else whose time I bill out, but that's not these cases.
Q. That's someone else at the Harvard Law School or --
A. That's correct.
Q. And what -- is that a student or --
A. She's a lecturer at Harvard Law School.
Q. In other consulting engagements but not this one you charge for her time?
A. I do.
Q. And who gets paid, the law school, you or her?
A. Whoever does the work gets paid, so it would be her if she did the work.
Q. Okay. But you send out the bills?
A. I would send out the bills -- no, she could bill directly. We haven't sent out the bill yet, but...

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Q. In terms of your analysis of some of the data sets we've discussed this morning, and let's focus particularly on the '98 Roper Starch report, is there anybody anyone who assists you, and once you get the raw data and decide that you were going to do some

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form of analysis or manipulation, is that something you do yourself or someone else does for you?

A. I would work with my computer programmer on that.

Q. And who's your computer programmer?

A. It's varied over time, so back then it was Jahn Hakes.

Q. And is it someone else today?

A. It's someone else today, so I've got Irineu Carvalho, Joni Hersch. Those are the three people I've worked with, primarily.

Q. And those are all people at the law school?

A. Or have been at the law school in various capacities, yes.

Q. Now, in some cases you do your own computer work?

A. I will be involved in supervising the jobs and reviewing all the runs, but I don't keypunch in anything.

Q. Okay. So data entry -- you do specification of equations, I presume?

A. Right. I'll specify the equations and tell them what the run.

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Q. But the actual data entry is done by somebody else?

A. Data entry, as well as typing in the programs, then I'll review the programs based on the printouts.

MR. STENGEL: What I would suggest is I need some time to get the rest of these large volumes of reliance material hopefully put together so we can get through them relatively quickly, so why don't we take a lunch break now, come back, I'd suggest in an hour. We can actually come back at 1:30, and hopefully I'll have the remaining reliance material, and as I suggested to you, compilations, so we can move through those fairly quickly.

MR. WAGNER: Very good.

THE VIDEOGRAPHER: It's now 12:21. We're off the record.

(Lunch recess taken.)

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AFTERNOON SESSION

(Document marked as Exhibit 10 through 14 for identification.)

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THE VIDEOGRAPHER: It's 1:25. We're back on the record.

W. KIP VISCUSI, Resumed
DIRECT EXAMINATION, Continued

BY MR. STENGEL:

Q. Good afternoon, Professor Viscusi. What I'd like to do now is, as you may or may not be aware, your counsel has produced a variety of materials to us as reliance materials related to the expert witness statement you've made in this case, and I need to know, A, whether we have everything that supports your opinion, and, B, to the extent there are gaps in that data, you would be in a position to precisely identify it. That being send, I have spent some time over the lunch hour to group various documents, at least to my untutored mind, look like they went together. And what I'd like to do now

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is walk through those. Now, some of them I will have substantive questions. As to others I'm really asking you for identification of what the material is.

And the first thing I'll start with is I'm going to hand you what I've had marked as Viscusi 10 through 14, inclusive, and these are computer disks with labels. 10 is labeled "Kip Viscusi 1985 Survey Data Zipped Excel." 11 is "Kip Viscusi 1985 Survey Data ASCII 2." 12 is "Kip Viscusi 1997 Survey Data Excel." 13 is "Kip Viscusi 1992 Survey Data ASCII." And 14 is "Kip Viscusi 1998 Survey Data." Now, I omitted a note that all of these say "Copy Set 1" on the label for the disk, and I'll hand those to the witness and ask if you can tell us whether you produced data in those forms. And I realize you don't have the ability to read what's actually on the disk. But do those labels correspond to information you provided to counsel?

(Mr. Kraus entered deposition room.)

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A. These were provided to counsel previously. Then they, in turn, copied them for you.

Q. All right. But as far as you know, those correspond to five diskettes that you provided to counsel?

A. Yes.

Q. And could you walk through them and tell us what, in general terms, you believe is on each of those disks and more importantly what survey or study they correspond to?

A. The 1985 survey data corresponds to the 1985 Audits & Surveys data, and it comes in two formats. Format 1 is a zipped Excel file, and Format 2 is an ASCII file. Exhibits No.

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12 and 13 correspond to the 1997 Audits & Surveys national data. Copy 12 is the Excel file. Copy 13 is the ASCII version of the same file. And Exhibit 14 is the 1998 survey data, and I'm not sure what format that's in, but it's probably one of those two.

Q. Now, is what is on those disks just the data sets, or will those reflect some of the statistical manipulation you've performed of

each of those data sets?

A. Just the data sets, I think. It may -- I'm not sure if it includes any recodings or variables, but it should include all the raw data. It may include some manipulations as well.

Q. All right. Your expert report or expert statement makes reference to your analyses of the raw data from those surveys. I take it to the extent you performed statistical tests or analyses on any of these data sets, you don't expect that to be on these disks?

A. That's correct.

Q. Do you commonly use a particular statistical program or set of programs?

A. I do.

Q. And what are those, or what is it?

A. SAS, S-A-S, and Stata would be the two packages that I use most often, sometimes Limdep. Those would be the main programs.

Q. Okay. And those are commercially available proprietary programs?

A. Commercially available programs that anybody can buy.

Q. And do you use one more than the other these days? Is Stata more useful to you than SAS?

A. Stata is more useful, yes.

(Document marked as Exhibit 15 for identification)

Q. What I will show you now, which I have marked as 15, is an admitted composite exhibit. What I have done is to group by, frankly, the physical appearance of the document and the coincidence of dates a variety of material which seems to correspond to some analysis which was being done in 1990.

MR. STENGEL: So I will show 15 to the witness.

Counsel. (Handing document to Mr. Wagner.)

(Discussion off the record.)

(Witness reviews document.)

Q. And, Professor, not to interrupt your review, but what I would suggest, unless your counsel objects to what would in form be a narrative answer, is rather than having me go through and ask you questions about

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each of those sort of subdocuments within 15, if you could just, taking them in the order that they are grouped together, provide us a brief description as to what each of those units appears to be, not in gruesome detail, obviously, but as an overall statement of what program or analysis is presented. I think that's probably the fastest and most efficient way through the document.
A. Well, Exhibit 15 pertains to regression analyses and various statistical tables calculated using the 1985 Audits & Surveys data.
Q. Does it relate to any other data set, that you can tell?
A. I would have to review it.
(Witness reviews document.)
A. It seems to be just the '85 data.
Q. Okay. Now, you've said that's a series of statistical or regression analyses of the '85 data. If we use those programs to reconstruct the regression or statistical methodology and the data set in either
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Viscusi 10 or 15, should we be in a position to replicate your -- whatever statistical manipulations are reflected in Exhibit 15?
MR. WAGNER: 10 or 11, you mean?
MR. STENGEL: 10 or 11, yes. But what's in 15 in terms of the manipulation?
MR. WAGNER: Oh, I see.
A. You know, I don't know, because this data was using a data set from 1990 at Northwestern. This data you have here (indicating) was the status of the file in the year of the Minnesota case, which is '98, '99? So it may be in a different format or something because it's been moved to the Harvard computer. I'm not sure if the variable labels are the same across data sets.
Q. But there shouldn't be any substantive difference in the data?
A. No. If you can figure out how to match it up, then there should -- you should be able to figure out how to do it.
Q. All right. Now, is this a complete collection of the analyses you performed?
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A. No. It's a complete collection of all the analyses I saved.
Q. All right. What was the criteria for deciding whether you were going to save or discard analyses?
A. Well, I moved from North Carolina to Boston, so not everything made it. And I tried to save key programs relating to my publications, so I'm not sure if this relates to my article in the Journal of

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Political Economy or in my book, but some of these look like the key results for each of those.

Q. Do you know what the approximate volume of the discarded material was?

A. I don't keep track of it. You know, you run things, see what it looks like. If you say, oh, I want to add another variable to the equation, you toss it, so it's not a question of where I'd always keep tabs of what we throw away and what we keep because we're constantly running things.

Q. Well, my question was, it sounds like there came a point in time when you were moving

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and you made a decision that there was a fair volume of paper you didn't need. And all I'm trying to get at is, did you discard a two-inch pile of paper or a file cabinet full of paper as relates to this sort of analysis?

A. I'm not sure if -- at that time if I discarded any of these things. I know I discarded many of the raw surveys from the '91 survey, so they didn't make the trip. But I'm not sure whether I made a conscious decision to throw anything away at that time.

Q. Okay. Several of those have large type headings that seem to be various labels or designators. Some of them have what appears to be tax appearing in the designation?

A. Right.

Q. What does that relate to?

A. Tax, there is a chapter in my book where I determine the cigarette tax equivalent or the excise tax equivalent of smoking. That might be what they relate to. Another possibility is with the various things I've

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tried to construct measures of cigarette taxes based on the respondent's location. Here I don't recall if we had the state or not, but we may have tried to construct an excise tax variable.

Q. Okay. Is there in that group a calculation by you of the confidence intervals related to your estimates of perceived lung cancer risk on the part of smokers?

A. I don't know. I'll have to look at it. We wouldn't have the confidence intervals. We'd have the mean and the standard error of the mean. I can construct a confidence error from that.

Q. Okay.

A. But I'm -- I don't know if it's in here. I could start looking.

Q. Was that the kind of thing you would expect to have saved if you were trying to save material which was supportive of your publications?

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A. Well, since I had the data set, I could always rerun everything, so I -- it's impossible, given my space limitations, to

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save every run for every paper. I'll save it for a period of time, but I moved, you know, in 1996, something like that, so this is my fourth year at Harvard. This -- I moved five or six years after this was done. Nobody asked questions about it in the interim, so generally I wouldn't save everything for that long a period because I've written too many articles to carry everything around.

Q. Where were you in terms of your educational institution when you were first retained with respect to the Attorney General cases?

A. I believe it was Harvard Law School.

Q. You were at Harvard, okay.

Could someone who was familiar with SAS look at those runs and identify what statistical manipulation is taking place?

A. Yes.

Q. The code is explicit in each of those?

A. Yes, it is.

Q. Would you need -- I think all those are SAS, correct?

A. They are.

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Q. How was that data -- or those -- how -- strike that.

That program was entered on cards?

A. No. It was keypunched in on a dumb terminal into a Unix server that we had at Duke University.

Q. And did you transfer the electronic version of any of these pieces of paper to Harvard when you moved?

A. No. The only thing would be bringing the data itself.

Q. All right. That's all I've got for 15.

(Document marked as Exhibit 16 for identification.)

Q. Let me show you what I've marked as Viscusi 16, which appears to be a fax to you.

(Witness reviews document.)

Q. Can you tell us what this document is?

A. This is a selection of some of the various hard copies of survey responses for my 1991 survey, as well as various pretests, various manipulations done with other question wordings.

Q. And the question wording was focusing

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particularly on -- if you look at the last several pages of this, there are different iterations of the among 100 cigarette smokers with different sizes of populations referenced and a different approach to a failure of knowledge. I mean, how do you

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respond to "I don't know"? Is that the only place where the questions are changing?
A. The only questions that differ are the ones about the risk perceptions regarding cigarette smoking.
Q. Now, this appears to be a fax from you to you. Where were you located when this fax was sent?
A. I was in Minnesota, and I asked -- since people asked for all the information we had, we went through my old files and -- or I asked people to go through my files, dig out everything I had and to send it.
Q. So --
A. I'm not sure if they faxed it or whether it was sent hard copy.
Q. Well, fair point. But it was sent from Harvard to you in Minnesota? Was that
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during the Minnesota trial?
A. Yes, it was.
Q. Who's John?
A. I don't know. Oh, this was a temporary secretary who I had going through the boxes to figure out which of the various boxes in storage had the surveys, then, you know, to ship things along.
Q. Is it your understanding that what we have here is the full extent of the materials you had relating to your North Carolina survey, with the exception, which is noted on the cover, that Pages 2 and/or 3 were omitted if there were no specific comments?
A. That's correct.
Q. This is not all of the North Carolina surveys, is it?
A. No. In fact, most of these relate to alternative versions of it as opposed to what's reported in the book.
Q. But as to this collection, you made a decision to retain this when you moved to Harvard?
A. Well, I'm not sure it was a conscious
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decision. These happened to be in the box that made the trip.
Q. And when you received this collection of documents in Minnesota, what, if anything, did you do with it?
A. Gave it to Amy Phillips, who's in charge of organizing all of materials for turning them over to the other side.
(Document marked as Exhibit 17 for identification.)
Q. I would like to show you what we've marked as Viscusi 16 --
MR. WAGNER: 17.
Q. -- 17, I'm sorry, which is another composite document. And, again, Professor, I've grouped these just because they physically look similar, and I think in this case the

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dates are all in 1989. And if you could, just take a look at those and tell us what they appear to be, and with the same permission of your counsel, I'd like you to go through on a narrative basis and tell us what the sort of bits and pieces seem to involve.

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(Witness reviews document.)

A. These are also runs using the 1985 Audits & Surveys data. And they are pertinent to my book, among perhaps other things, but they are pertinent to my book.

Q. And those are also materials that you either elected to save or were saved when you made the move from Duke to Harvard?

A. That's correct.

Q. Can you tell whether there is any data other than the '85 data set being manipulated in those programs?

A. Well, since it was 1989, that would be the only data set.

Q. All right. That was before your North Carolina survey?

A. That's correct.

Q. What program or programs are being used or reflected in those pieces of paper?

(Witness reviews document.)

A. SAS. It was a SAS program.

Q. Okay. Do you have any recollection, as we sit here today, what you were doing in 1989 with respect to this data versus what you

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were doing in 1990?

A. '89 would be the article. 1990 would probably be the book.

Q. Okay.

A. That would be my best guess as to what would be the difference between the two time periods.

Q. All right. We've now seen two fairly substantial collections of hard copies of programs relating to your use of data sets. Those relate to the '85 Audits & Surveys data set. Have you generated similar hard copies of programs with respect to the '97 A&S survey or the '98 Roper Starch survey?

A. No. There are some printouts of output that I've turned over as part of my exhibits, I believe, in some cases, probably in this one as well. I'm not sure if they made it, but -- they have been turned over on various occasions, but there's no comparable pile of programs. There would be, you know, a sheet here or a sheet there.

Q. Have you discarded programs of that sort?

A. Well, I look at the output and make my

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tables for my publications. Then I toss the output figuring I could just regenerate it.

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(Document marked as Exhibit 18 for identification.)

Q. Let me show you what we marked as Viscusi 18, and this is also a compilation, but a much smaller one.

A. I see it.

Q. And can you tell us what those are or were?

A. It's a variable list for the 1997 Audits & Surveys --

Q. Actually -- I'm sorry, I didn't mean to confuse the record. There are two pieces clipped together. I think one is '85, and one is '97?

A. Right. And these were -- this is the variable list, including the explanations for my -- from my programmer as to what these things meant, so we tried to be of assistance of the people in Minnesota when we were turning over the data to provide some sort of glossary as to what it meant, and if we created new variables, to hand over the new variables as well.

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Q. Is it your recollection that these glossaries were prepared for purposes of supporting a production in Minnesota, or did you keep a list like this contemporaneous with receipt of the data?

A. My programmer would have a list, but this was the list that he prepared to try and assist our response to the request for information in that litigation.

Q. All right. But as you sit here today, you believe this is a complete list of the data fields, for lack of a better term, that are in the '85 and '97 Audits & Surveys raw data?

A. No. There are certain things that aren't here. You can see there are certain blanks, but this is the best my programmer could do in response to the request.

Q. All right. So, for example, as you sit here today, you don't know what R1 and R2 were in the '85 ASW survey?

A. That's correct.

Q. Was the programmer a different person in each case, or was it the same person?

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A. The same person prepared these glossaries, but it was a different person than did all the runs you just talked about.

Q. All right. And who was that person?

A. This person was Jahn Hakes.

Q. Okay.

(Document marked as Exhibit 19 for identification.)

Q. Let me show you what we've marked as Viscusi 19, which is an article entitled "What does it mean to know a cumulative risk?"

(Witness reviews document.)

Q. And this was also produced to us as part of

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your reliance material. When did you receive this document?
A. Well, I received the article itself from a journal in either 1997 or 1998. I forget which.
Q. You were a reviewer on a --
A. Yes.
Q. -- publication?
A. That's correct.
Q. Was the article published?
A. It was published with my response.
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Q. And that publication was in 1998?
A. Publication is Year 2000.
Q. 2000, okay.
And what journal is that it?
A. The Journal of Behavioral Decision Making.
Q. But was Mr. Slovic's article published essentially in this form, and you were given an opportunity to respond?
A. I haven't read the published form, but I did a response to this paper for that issue.
(Document marked as Exhibit 20 for identification.)
Q. Let me show you what we've marked as Viscusi 20.
(Witness reviews document.)
Q. Professor Viscusi, could you describe Exhibit 20 for us?
A. These are various tables. I'm not sure what paper they're from, but these are various tables of mine.
Q. The first page appears to be a catalog of various mandated cigarette warnings; is that correct?
A. That's correct.
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Q. And did you draw these together in this form?
A. Yes.
Q. Do you remember why you did that?
A. I was going to include them in a paper, probably it could be the Duke Law Journal paper. I put these in a lot of papers.
Q. All right. And this reflects the fact that the warnings had become more extensive and more ominous over time?
MR. WAGNER: Object to the form.
MR. BAILEY: Objection.
A. The only purpose was to summarize the text, so there's no editorial statement regarding the character of the warnings.
Q. But you are aware and have been aware at all times of the various required warnings, correct?
A. Yes.
Q. And you also prepared a table of various proposed tobacco litigation resolution-related warnings?
A. I did.
Q. And you prepared Tables 3 and 5?

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A. That's correct.
Q. Do you know what data set or sets 3 and 5 are based on?
A. I would have to check, so I don't know because they're not labeled.
Q. Well, does Table 5's inclusion of a life expectancy loss help to identify what data set it relates to?
A. Neither has an identifier, but if I were to guess, it would be the 1997 Audits & Surveys survey, which we could certainly verify by checking the wording of the life expectancy question, because it varied between '97 and '98, but since it's develop lung cancer as opposed to die from lung cancer, that would seem to peg it at '97 not '98.
(Document marked as Exhibit 21 for identification.)
Q. All right. Well, let me show you 21 -- Viscusi 21, excuse me, which is another collection of computer printouts, a much smaller one.
(Witness reviews document.)
A. Okay.
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Q. Can you tell us what that document appears to be, at least to you?
A. It seems to be results using the 1997 Audits & Surveys data.
Q. And when was that document created, although obviously past '97?
A. I don't see a date on it, but it was faxed in 1998 somewhere, so my assumption is that it was created in 1998.
Q. Do you know for what purpose it was created?
A. Well, it was part of my analysis that I've done, and I'm in the process of writing an article -- series of articles and books -- a book using the '97 data.
Q. Have there been other hard copies of computer runs that you've discarded relating to that data set?
A. I'm not even sure I have this one. This is just something that I may have supplied to the attorneys, but I'm not sure I retained a copy of this.
Q. All right. Do you know why you would have provided it to counsel?
A. Well, it has some interesting results here,
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union versus non-union, and in the ironworkers case, those were union members, so some of these breakdowns look more interesting than others given the nature of that litigation.
Q. Do you have any recollection, as you sit here today, that that was related to ironworkers?
A. That's my assumption, that it was related to

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ironworkers, but I'm not sure I represented any of this evidence as part of the trial.
Q. Okay.
A. I'm not sure whether we just relied on the overall statistics.
Q. What statistical program does that reflect?
A. This was probably also SAS.
Q. And that's the '97 data set?
A. That's right.
MR. STENGEL: I now have what I hope to be plain copies of Professor Viscusi's book, so what I propose to do is substitute one of these for --
MR. WAGNER: It's Exhibit 2.
MR. STENGEL: 2?

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(Exhibit No. 2 remarked.)
Q. And, Professor, just so the record is complete, I'd ask you to look at what we've marked as a replacement Viscusi Exhibit 2 and make sure that that is what it purports to be, which is a copy of your book Smoking, Making the Risky Decision.
A. It is. Some pages are turned different ways, but I just assume that's the way it got faxed.
Q. That's probably because of the burden we put on the fax room.
A. Right.
Q. As relates to your book Smoking, has anything since its publication caused you to abandon or change any of its conclusions?
A. Well, that's a pretty big --
MR. WAGNER: Object to the form.
A. -- you know, wide open question given the fact that, you know, in this 160-odd-page book there are dozens and dozens of conclusions, but if you'd specify which conclusion, I would be happy to --
Q. Well, I'm --

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A. -- discuss it.
Q. -- really looking for sort of higher resolution issues. Obviously there may be minor data points here and there, but you make some broad conclusions in the book, and all I need to know is whether I can and my clients can rely on that book as still being reasonably reflective of your views on smoking and the smoking at risk.
MR. WAGNER: Object to the form.
A. I've written many, many things since then, so if this contained all my views, I wouldn't have bothered to write any more papers or art -- or articles or books in the area, but since I'm still writing in the area, there are new views that I think need to be expressed.
Q. Well, leaving aside the need for new views, it's never come to your attention that something in Smoking, Making the Risky

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Decision is wrong?
A. Not that I know of.
Q. And there's nothing that you have in subsequent writings taken the position was a
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mistake and erroneous approach? You've never disavowed in print any part of that book?
MR. WAGNER: Object to the form.
A. Well, not to the best of my knowledge. I'm not sure what you're getting at, but I've never said that anything here was wrong, as far as I know.
Q. That was what I was getting at. Thank you.
We talked some this morning about your first contact with -- and I want to be accurate here. I think you testified at a number of points where your contact has always been with counsel for tobacco companies rather than tobacco companies themselves; is that correct?
A. I did consult for one warning on the design of the warning label for Premier Cigarettes.
Q. But with that exception noted, your contact has been with lawyers for tobacco companies?
A. They've been the ones to whom I've sent the bills and so on. I may have met a tobacco industry person on a couple of occasions.
Q. When was the retention on Eclipse, mid-'80s?
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MR. WAGNER: Object to the form.
MR. BAILEY: Objection.
A. I've never been retained on Eclipse, but it was on Premier.
Q. Premier, I'm sorry, I misspoke.
A. And it was right after it hit the market, whenever that was. I don't know the exact date.
Q. And the subject of your retention was?
A. The carbon tip of the cigarette would fall off, potentially creating a fire hazard, and they wanted to know how to word the warning to alert people of the fire hazard risk associated with the cigarette.
Q. And that's all you did?
A. That's all I did.
Q. Let's go back to the rest of your contacts, those with lawyers for tobacco companies. You were working with Jones, Day on risk, generally, in the mid-'80s, correct?
A. I did -- I talked to them about my work in the risk area, if that's responsive.
Q. When did you first undertake a -- again, leaving the direct consultancy aside, when
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were you first retained by counsel for a tobacco company?
A. I'm leaving aside all of my discussions with them in the '80s, and we're working on litigation or --

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Q. No, I want to include that. I would view that as part of your retention. If you were dealing with tobacco-related issues, that, I think, is fairly encompassed in my question.
A. I believe that was before Premier. It was after the Audits & Surveys survey was run, and I had discussions with them about risk perceptions generally in the '80s. I'm not sure when.
Q. And recognizing that activity levels will vary, have you generally had some ongoing projects for counsel for tobacco companies since then?
A. No. There were, you know, substantial periods of time when I had no work at all for the tobacco industry.
Q. Did you view that as being related to whether there were active cases against the

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tobacco industry?
A. No, because I never testified or served as a witness for the tobacco industry until recently, so it was not like I was involved in any active cases.
Q. Do you know how much in the aggregate you've been paid by counsel for tobacco companies?
MS. PHILLIPS: I'm going to instruct the witness not to answer to the extent that it addresses the Minnesota case. It's been the practice of both parties in the Blue Cross case that all compensation related to Minnesota will not be disclosed because there was an agreement in the Minnesota case that compensation would not be disclosed.
MR. STENGEL: And your view is that agreement's binding on non-parties to the Minnesota agreement?
MS. PHILLIPS: Yes, that's been the position taken by plaintiffs in Blue Cross, and it's been the position taken we defendants as well.
MR. STENGEL: Well, we're not party

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to that agreement. The Falise plaintiffs haven't made that arrangement. I think it's fairly discoverable under the Federal Rules. And, in fact, arguably it's required under the Federal Rules, so I'd like an answer to the question.
A. I don't recall.
Q. Could you calculate that given your historical records?
A. No.
Q. How much have you billed counsel for tobacco companies in the past year?
A. I don't know that, either.
Q. Do you know what your hourly rate is?
A. Right now I do, yes.
Q. And what is that?

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A. 550 an hour.
Q. Is that the same whether you're testifying or doing analytical work?
A. It's the same for everything, although there's a minimum on deposition, so if you go part of the morning and part of the afternoon, it's a whole day, regardless of whether they use the whole day.

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Q. And how much did you bill counsel for tobacco companies in 1999?
A. I don't know that, either.
Q. Is it more than $10,000?
A. Well, I'm not going to start guessing intervals, but it certainly was more than $10,000.
Q. Do you recall approximately how many hours you spent working on tobacco-related matters for compensation in 1999?
A. No.
Q. Do you have records of that?
A. For 1999 I should be able to dig out that information.
Q. Well, let me ask it this way: I presume that you receive a salary from Harvard Law School?
A. Yes.
Q. And you have consulting income which shows up on your tax returns?
A. I do.
Q. And in 1999 how much of that consulting income was from sources other than consultation with respect to tobacco and

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tobacco litigation?
A. A great deal.
Q. All right. I presume you bill people for the time you spent on this litigation?
A. Yes.
Q. Do you retain copies of those bills?
A. For a period of time, yes.
Q. And what's that period of time?
A. It varies. I would certainly keep bills for 1999 right now, for example.
Q. Do you know whether you have those bills for 1997 or 1998?
A. I don't know. I would have to look.
Q. You have not looked to date?
A. I have not looked.
Q. Obviously you've been retained as an expert in Falise, National Asbestos Workers and Blue Cross, and I want you to be careful not to disclose the name of a case or counsel if you have not been identified as a testimonial witness, but are you under retention as we speak today in other tobacco-related litigation?
A. Yes.

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Q. Have you been disclosed as a testimonial

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witness in those litigations?
A. Yes.
Q. And what cases are those?
A. I've been deposed in Boerner, which I believe may still be active. Simon I'll be deposed in next week. In California, Warnings Proposition 65 case I've been deposed in. There's a trial coming up. I believe I've been disclosed in some individual cases as well.
Q. Do you know how many individual cases you've been disclosed in?
A. No.
Q. How many cases -- and, again, if you haven't been disclosed as a testifying witness, I don't want to know anything about the identifier of the case. I just wanted the number of cases where you've been consulted or retained by counsel with tobacco-related subject matter.
A. If I had my case list, I could figure this out a lot better.
Q. Do you maintain a case list?
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A. We turned one over to you or to whoever else is on your side, yes. We did turn that over.
Q. We have a list of prior testimony. I'm not sure it was -- see --
A. Is this every case?
Q. We're getting in a legal realm.
A. (Unintelligible.)
Q. We're not entitled to know the identity of the cases you've been in if you're not a testifying witness.
A. There's every -- well, it's every case in which I've been deposed or testified.
Q. Right. And all I'm asking is if you can give me a number, just a number, as to cases where you have not been identified, so you would neither have testified nor been deposed.
A. I don't know an exact number.
Q. Okay. I know you don't like intervals, but is it more than 10?
A. I don't know how many individual cases I've yet been named in, but they're not 10 large cases, if that puts it in perspective.
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Q. That helps somewhat.
Let's go back to your expert witness statement. It should be in the pile. It's Viscusi 1. In Paragraph 9 on the second page you make reference to an efficient warnings policy. Efficiency is an economic rather than legal concept, correct?
A. I think it has legal implications, so I'm not sure it's strictly of interest to economists.
Q. Okay. Well, what do you mean when you use the term "efficient" in that paragraph?

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A. In general, we would want to assign the responsibility to warn on the party for whom it makes the most sense to warn, so in this instance not all smokers of cigarettes are potentially exposed to asbestos, a very small portion of them are, whereas a much larger portion of the asbestos workers would be exposed to cigarette smoke. So that from the standpoint of designing an effective warnings policy, it would make the most sense to have responsibility for the warnings to be with the asbestos industry

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rather than the cigarette entry.

Q. Does efficiency capture the concept of practicality?

A. Well, it's not just practicality it has implications with respect to the character of the information that would be conveyed by the cigarette industry, so, for example, if there were synergistic effects with 10 different chemicals, you wouldn't want to establish a situation of information overload and communicate that to all cigarette smokers. You would want a more narrowly focused risk communication effort that got directly to the people within those particular industries or particular exposure areas that were of concern.

Q. Have you analyzed the warnings practices of any foreign countries?

A. I have been involved in some work on the Canadian warnings at one point, and as a tourist I've observed warnings in various contexts. And I have a series of three articles coming out on the warnings practices in Spain.

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Q. But those are limited to Spain?

A. Only in Spain, those articles.

(Mr. Boas left deposition room.)

Q. It is true, is it not, that smokers typically purchase their cigarettes in their original packaging?

A. Yes.

Q. I would like to draw your attention to Paragraph 10. You conclude with a conclusion, which I gather is in your paper, "Alarmist Responses to Divergent Risk Information," that people tend to place a greater weight on higher risk evidence. And that's one of the conclusions of that article, is it not?

A. Yes, it is.

Q. Wasn't it also a conclusion of that article that if high risk information was disclosed by, in that context, the source of pollution or company guilty of pollution, it was given greater weight than if the government made the disclosure of high risk evidence?

A. I don't recall there being a significant

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difference. The key is if both parties are

different and they disagree, so if you have industry low, government high, government low, industry high, no matter how you mix it, you still get the alarmist response.

Q. But you posit in that article, do you not, that there are reasons why people should give greater weight to high risk disclosures by companies because it is contrary, in all likelihood, to the company's economic interest to make those disclosures?

A. One might have expected that to be the case, but, in fact, it didn't turn out to be the case, so that was what was one of the interesting results.

(Mr. Boas entered deposition room.)

Q. You have -- you mentioned in Paragraph 11 that you have prepared detailed statistical analyses of the determinants of smoking risk perceptions and smoking behavior. We have gone through several bundles of paper from your reliance materials, and we also obviously have your CV and your various publications. Do you have detailed statistical analyses of the determinants of

smoking risk perceptions and smoking behavior that have not been made available to us?

A. I've run the same kinds of runs for my book with the '97 and the '98 survey data, and you have results here for '97 which show that education, for example, doesn't alter the results, so you have enough results for '97, I think, to cover that turf. You get similar results for '98 that I ran as well.

Q. Do you know -- strike that.

Have you ever reviewed any data relating to the trust claimant population, the trust claimant population being claimants against the Manville Personal Injury Settlement Trust?

A. No.

Q. Okay. So you don't know when those individuals started smoking, for example?

A. Varied depending on the individual. Based on my general knowledge of this, this is not all new claims, for example, and depending on how old they are would depend on when they started smoking.

Q. Right. And do you have any awareness of how old these claimants were when they began smoking?

A. I've been given no information on the statistical distribution of claimant age.

Q. All right. So that's not relevant to your conclusions, at least to date?

A. All my conclusions simply involve, you know,

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stating what I've found in my research, and to the extent that they're pertinent to the case, I'll let the lawyers figure that out when the time comes.

Q. To borrow a -- strike that.

MR. WAGNER: A pejorative was coming?

MR. STENGEL: Yes.

Q. The issue of mechanism comes up in other context, and you make conclusions in your analytical work about individual respondent's perceptions of smoking risk. Obviously not all the survey respondents are visually reviewing the Surgeon General's reports or the medical literature. Do you have a theory or belief as to the mechanism

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by which information relating to smoking risk is transmitted to the public at large?

MR. WAGNER: Objection to the form.

MR. NEMSER: Object to the form.

A. People have enormous sources of information at their disposal, the media. You can look at article counts, even on Lexis which just began to track articles in the recent years. You know, tens of thousands of articles every year now appear about smoking. Every time the Surgeon General releases a report, it's followed by, you know, a press conference and media coverage. There's cigarette warnings on packs. There's many sources of information that people have. Risks of cigarette smoking are incorporated in the curriculum in public health classes throughout the country. A variety of organizations now have antismoking ads, so there's a lot of information out there.

Q. But you don't need to trace a particular piece of information to any particular respondent to make an overall judgment as to

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the availability of negative information to smokers generally or survey respondents generally?

MR. NEMSER: Objection.

MR. WAGNER: Object to the form.

A. In general, I think it's very difficult to disentangle a particular piece of information when so much is happening at the same time. My major concern is that when all the dust settles, do people who smoke cigarettes have risk perceptions that are accurate? And the results indicate that not only are they aware of the risks, but they overestimate the risks.

Q. With respect to your conclusion that they overestimate the risks, wouldn't an economically rational tobacco company then rush to market a product like Eclipse so it could take advantage of that overestimation

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of risk?
MR. WAGNER: Object to the form.
MR. NEMSER: Objection.
A. The cigarette industry has attempted to market various alternative cigarette
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designs, and they are limited by government regulations as to what they can say about these products, and it is noteworthy that when they come up with these products, they're frequently attacked by government officials.
MR. STENGEL: The videographer needs to change the tape within three minutes. Why don't we go ahead and take a break now so he can do that. I don't have a lot left just as a warning to my cohorts and a reassurance to the witness.
THE VIDEOGRAPHER: The time is 2:26. This is the end of Video Cassette No. 2. Off the record.
(Recess taken.)
THE VIDEOGRAPHER: The time is 2:39. We're again on the record. This is the beginning of Video Cassette No. 3 in the deposition of Professor W. Kip Viscusi.
MR. NEMSER: Before we resume I'd like to make a quick statement on the record about the questioning that occurred just before the break relating to the issue of
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compensation. In the National Asbestos case there is an agreement between plaintiffs and defendants that issues of expert compensation will not be inquired about and will not be used in the course of trial. And I want to be clear that the questioning that just took place did not constitute a waiver of any rights that the defendants may have under the agreement in National Asbestos vis-a-vis the compensation issue.
MR. STENGEL: That's fine. I --
MR. BSCHORR: Since we're putting things on the record, let me clarify something also on behalf of Blue Cross. It was stated before on the record that there's an agreement between the plaintiffs and defendants in Blue Cross with respect to the Minnesota -- with respect to the Minnesota compensation. I believe that's a misstatement. There is no agreement. My understanding is that there have been witnesses that have on their own refused to give that information, and that is an open issue, but there is no agreement. You have
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taken the position on behalf of the defense that as long as certain plaintiffs' witnesses will not give that information, you're directing your witnesses not to

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answer, which is certainly your privilege, but that is no agreement to that effect --

MS. PHILLIPS: Okay.

MR. BSCHORR: -- so let's be very clear on that.

MS. PHILLIPS: And if I said there was an agreement, that was a misstatement, rather that it had been a practice I believe is the word I used, that the plaintiffs' witnesses have not answered questions about compensation when the defense lawyers have asked and have premised that on the idea of the Minnesota agreement not to disclose compensation.

MR. BSCHORR: Yeah, again, let me correct you. There is no practice. There are a couple of witnesses who have stated that they would not disclose the Minnesota compensation they received or whatever the situation is with respect to it. That's

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their decision that they've taken. Other witnesses have fully answered those questions, and there is no agreement and no understanding and no practice with respect to compensation in the Blue Cross case. There are people who have taken that position, and you have taken on behalf of your own expert witnesses a corresponding position as long as they won't -- a couple of them won't testify about Minnesota, you won't ask about it -- you won't allow us to ask about it. I understand that position, but that's not a practice, nor is it an agreement.

MS. PHILLIPS: I think everybody's position's on the -- clear on the record.

MR. BSCHORR: Thank you.

MR. STENGEL: We could start over again. I think we're all clear on the record.

Q. And, Professor Viscusi, I'm going to try and run through this quickly because there are some materials in your reliance materials which were produced to us that I think

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probably don't relate to your opinions in Falise, but I need to ask the questions and find out because one production was made in all three cases. To that end I'll show you what I'll mark as Viscusi 22, which is a document with the title "National Survey of Successful Mid-Life Development."

(Document marked as Exhibit 22 for identification)

(Witness reviews document.)

A. I see it.

Q. Could you describe for the record what that document reflects?

A. This was a survey on health risk perceptions and other aspects of people's lives

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undertaken with funding by the MacArthur Foundation.
Q. Is that study something that you are using as a basis for your conclusions or opinions in the Falise case?
A. It all depend on what the opposing expert said, so I don't know what they're going to say. So it could come up, but I'm not planning on using this affirmatively in
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Falise.
Q. All right. So the expert opinions or statements -- and I will exclude from that, I suppose, your sort of savings clause in Paragraph 12 as what you might do, but as to your affirmative opinions in Falise, they do not rely on what we've marked as Exhibit 22?
A. That's correct.
(Document marked as Exhibit 23 for identification)
Q. All right. Let me show you now what I've marked as Viscusi 23, which is a paper entitled "Why the health and retirement study survival probability is not a probability" by W. Kip Viscusi and John -- Jahn K. Hakes, H-A-K-E-S, dated December 3, 1998.
A. I see it.
Q. Could you describe that document for the record, please?
A. This is a paper that we wrote on the health and retirement survey data to see whether it was an appropriate measure of beliefs regarding likely survival to particular
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ages.
Q. And in a similar fashion, is that paper relevant -- or the data included in that paper relevant to the affirmative opinions that you're offering in Falise?
A. I'm not planning on using this for that purpose.
(Document marked as Exhibit 24 for identification)
Q. All right. Let me show you as -- what we've marked as Viscusi 24, a document which is entitled "MIDI," all caps, "The Midlife Development Inventory, Part 1 Questionnaire."
A. (Witness reviews document.)
I see it.
Q. What does that document purport to be, or what is that document?
A. This is part of the questionnaire that corresponds with Exhibit 22.
Q. All right. And same question, is that something that you intend to rely on as part of your affirmative opinions in Falise?
A. No.
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Q. All right.
MR. WAGNER: That was 24, Professor.
THE WITNESS: This is 24.
(Document marked as Exhibit 25 for identification)
Q. Now, handing the witness Viscusi 25, which is captioned "MIDI, The Midlife Development Inventory Telephone Questionnaire," I take it that's a companion piece to the last exhibit?
A. Yes, it goes along with Exhibit 24.
Q. And you don't intend to rely on that in the context of your affirmative Falise opinions?
A. That's correct.
Q. All right. Let me mark as Viscusi 26 the "Harvard Survey of Health and Life Quality," dated 1994/1995, "Part 2 Questionnaire."
(Document marked as Exhibit 26 for identification.)
Q. Can you tell what that document is?
A. It's a continuation of Exhibits 24 and 25, part of the same survey.

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Q. So the same position would apply, that you're not planning to use that as part of your affirmative opinions in the Falise case?
A. That's correct.
Q. Let me cover with you a couple of subjects. What did you do to prepare for today's deposition?
A. Since the start of the case or just in the past week?
Q. Well, why don't we -- actually, from the start of the case is probably not a bad way to do it. I'm not sure we've really talked about your level of effort, at least not past the submission of your report on November 1, '99. We talked some this morning about your initial contact by Mr. Pope and your beginning work on the case. Do you know approximately how much time you spent before the submission of your November 1 report?
A. No.
Q. Were you working full time on the report between Mr. Pope's communication with you

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and its submission? Were you working on it intermittently?
A. I was working steadily on it for a period that was less than a week, I would say.
Q. All right. And when Mr. Pope contacted you, did you have any discussion about what your general views were on risk perception and how they might relate to the Falise case?
A. I think he was familiar with my work on risk perception, so I didn't have to explain it.
Q. Did you two discuss what issues you would

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need to address in the context of the Falise case?
A. Well, the issue came up. I had the results for smokers as a whole. To what extent would these results generalize to the population of individuals such as asbestos workers. So that would be a question that came up.
Q. Was that the question that came up, or did you provide him with an answer at that point?
A. Well, I had the answer, but that would be the character of the discussion, wanting to
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know if these results were pertinent to that in context.
Q. Did you and Mr. Pope -- strike that.
After you submitted your report or your statement on November 1999 -- or in November 1999, what did you do next, if anything?
A. He had continued to send me materials from time to time that I would review when I had a chance, so I received maybe three or four shipments of materials between then and the past week or two.
Q. All right. Do you recall receiving any materials that I haven't marked as an exhibit here today?
A. Well, we don't have the amended complaint, for example.
Q. All right.
A. And we have not looked at Dr. Harris's reports.
Q. But other than those litigation-related documents, is there any material that you haven't seen as an exhibit here today?
A. We don't have the reports by the other
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defendant experts that I said that I looked at.
Q. Okay.
A. There may be other materials I've looked at like -- I've looked at the Surgeon General's report in relation to this.
Q. Just the '89 or others?
A. For this case, only '89, but I've looked at many of them, read many of them. I may have had other articles. I just don't recall.
Q. When you mentioned reading other defense expert reports, did you see those in final or in draft form?
A. I saw whatever form they're in this week, so I believe I got just initial drafts of their reports plus an amended report by Sheffman. Is that his name?
Q. That's one of them.
A. Yeah, so I got an amended addendum to his report.
Q. Now, the Sheffman report is quite long, is it not?

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A. Yes.
Q. Did you read the entire report?
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A. No.
Q. How much time did you spend reading that report?
A. I mean, I spent more time reading -- I'm not sure the time allocation versus the addendum r the report, so I read one document thoroughly. I'm not sure which one it was. Then the other one I went through much faster, but one of them I spent some time on.
Q. All right. Now, that takes us up to the last week or so, which takes us back to the initial question of what you did to prepare for the deposition here. And other than the review of those materials, what have you done to prepare?
A. Well, I reviewed the materials, and I met with the attorneys yesterday to discuss today's deposition.
Q. And which attorneys were those?
A. I've brought the list. Jeffrey Wagner. I already knew Paul Nemser, but I had his card so I could find the location of the office. Eric Kraus, Jonathan Streator from Arnold &
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Porter, Amy Phillips from Arnold & Porter. So I did not meet with Mr. Bailey --
Q. All right.
A. -- yesterday.
Q. And how long was this meeting?
A. The morning, I'd say nine to 12:30, 8:50 to 12:30, something like that, and then in the afternoon, 3:30 till five, 5:30, something like that.
Q. And what did you discuss over the course of the meeting?
A. Just talked about cigarette risk awareness issues, talked about my articles. I discussed my research with them. They mentioned that there are three cases, and they explained that there are three cases that I was going to be deposed on in the same day, that sort of thing.
Q. All right. Did you review any of your prior testimony in preparation for this deposition?
A. No.
Q. Have you reviewed any of your prior testimony at any time since you've been
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retained in this case?
A. No, not that I know of, except if I had to correct something for typos.
Q. Excluding corrections of transcripts before signature.
A. That's correct.
Q. In anticipation of this deposition, did you

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reread your book Smoking, Making the Risky Decision?
A. No.
Q. Did you review any of your articles?
A. Only insofar as I would be showing them things from my articles or book, but I did not pick up anything and read it for this deposition --
Q. All right.
A. -- for that -- from my books.
Q. Did you bring copies of your book and articles to the meeting?
A. No.
Q. Counsel had them?
A. Well, they were in my office, so I didn't have to bring them.
Q. Oh, the meeting was in your office?
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A. Yes.
Q. All right. Let me talk about a couple of subjects I don't think we've really touched on as of yet. Do you have a view on whether smoking tobacco is addictive?
MR. WAGNER: Objection. It's beyond the scope of his testimony, the opinion which he's offering in the case.
A. Yeah, addiction is a, you know, medical --
Q. Well, let me withdraw that question and ask one that I think will be more clearly relevant to the opinions you're offering. And I will ask you explicitly to assume with me hypothetically that cigarette smoking is an addictive activity. If cigarette smoking is addictive, what relevance does a risk perception, whether it is accurate or not, have on an addicted smoker's behavior?
MR. NEMSER: Objection.
MR. BAILEY: Objection.
MR. WAGNER: I guess I don't have to. We said it applies for everybody, right?
MR. STENGEL: Uh-huh.
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A. Could you define "addiction"?
Q. The inability to stop smoking.
A. That's not true, though. People can stop smoking. They -- we have almost as many people who have quit smoking as who currently smoke, so I need a better definition than that.
Q. Okay. Well, when you think of addiction, what definition do you use?
A. I don't use the term except to generally refer to the difficulty of quitting smoking. Addiction is a medical term. So I'm not holding myself as an expert on the medical classification of smoking. Economists have their own interpretation in the addiction literature, but that may or may not coincide with what doctors mean by it.

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Q. Well, are you familiar with the definitions in DSM-4 or those used by the World Health Organization?
A. I've seen some discussions of addiction in the medical literature, but I'm not in a position to make medical judgments with

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respect to whether smoking is addictive or not.
Q. Well, let's use an economist's view of addiction, which I believe you have written, to characterize addiction as meaning there are substantial costs associated with quitting. I don't think you've attempted to quantify that, but that, I believe, is a reference that you have made, correct?
A. That would be one component, yes.
Q. All right. And my question is that if you accept that definition of addiction, that there are substantial costs for the individual smoker in quitting smoking. Assuming they already have begun to smoke and they are addicted, what relevance does their perception of risk have or the accuracy of that perception to their future conduct?
MR. NEMSER: Objection.
MR. BAILEY: Objection.
A. If there are costs to change, and then you would want people to have accurate risk beliefs when they're engaging in that

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behavior, assuming that they were going to learn differently about the risks over time. If they're never going to change their risk beliefs, they're never going to want to change their behavior. Then you don't care about the cost of change.
Q. But people's risk beliefs do change, do they not, depending on the information that's provided them?
MR. NEMSER: Objection to form.
MR. WAGNER: Objection.
A. In some contexts they change, but here we have a situation where people already overwhelmingly overestimate the risks of smoking, so to the extent that there are welfare losses, it's not that they're trapped inefficiently in behaviors for which they underestimate the risk.
Q. Now, when you -- you introduced a new concept for me and the jury here. When you used "welfare loss" in that response, what did you mean?
A. What's the expected utility of the smoker conditional upon the true risk information?

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So if, for example, people knew the true risks of smoking as opposed to their own risk beliefs, how would we define their

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welfare, and what would they do? Would they change their behavior? And what we find is that because people overestimate the risk, if people knew the true risks of smoking, more people would smoke than who now smoke and that you would not have an incentive to give up smoking once you knew the true risks, because that would lower your risk beliefs. That would make cigarette smoking more attractive.

Q. So just to make sure I understand your response, what you're saying is, from an economist's perspective, you want to inhabit a world where people are making consumption decisions based on accurate information, and you feel the evidence with respect to tobacco consumptions, to use a concrete example, is that if people were not overestimating the risks, more people would smoke, and that would be desirable from your perspective?

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MR. WAGNER: Objection.

Q. You're assuming -- well, me make sure I understood your response.

A. More people would smoke. I'm not personally making a value judgment on it, but on the -- from the standpoint of making decisions that coincide with the actual risks of smoking as opposed to their beliefs concerning smoking, from their own vantage point their expected utility would be higher based on the true risks if they are currently being deterred by an exaggerated perception of the risk.

Q. All right. And that, you assume, do you not, just to make sure I understand what you're saying, that as the risk of smoking -- the perceived risk of smoking declined, leaving aside whether that's accurate or not, more people would choose to smoke?

A. Yes.

Q. And conversely, as the actual risk -- I'm sorry -- as the perceived risk, leaving aside again whether that's an accurate assessment, increases, fewer people would

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smoke?

A. It's not an assumption. This is true. I mean, it's been -- I've estimated this.

Q. I will accept that statement.

Different subject, initiation of smoking by minors. Is it your view that a 14-year-old processes risk information in a manner that's consistent with a 25- or 35-year-old?

MR. NEMSER: Objection.

MR. BAILEY: Objection.

A. I don't know exactly how a 14-year-old processes his risk information, but I do know that once we've carried it down to the

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16-year-olds, we find that people are very aware of the risks of smoking, but it's different than for older age groups since they actually have larger risk beliefs than do people in the younger age groups.

Q. It is a fact, is it not, that in the 1997 A&S survey and the 1998 Roper Starch survey a decision was made not to make inquiry of those below the age of 18, correct?

A. The sample age cutoff is 18 for both of

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those surveys.

Q. Thank you.

Have you written specifically about the risk perceptions of youth?

A. I have.

Q. Have you written about the propensity of youth to engage in risky behavior?

A. I have. I even have an article on age-related smoking behaviors.

Q. And in terms of generally risky behavior, do those under 18 have similar or different -- I don't want to use a precise term, but appetites for risk?

MR. WAGNER: Object to the form.

MR. NEMSER: Objection.

A. I think the current state of knowledge regarding that is that youths have been given a bad rap over time and that they're not as unsafe as adults often make them out to be. That seems to be the current view in the psychology literature, for example.

Q. But that's psychology literature, that's not survey work?

A. It's survey work reported by psychologists.

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Q. But not survey work that you've done?

A. Survey work I've discussed.

Q. Now, I'm not asking whether you accept this but just whether the literature reflects that for a personal risk taking activity like smoking, some researchers believe that people may discount risk evidence for risky activity that they, themselves, have chosen?

A. Some researchers have asserted that, yes.

Q. And that's out there in the literature?

A. I believe some plaintiffs' experts have said that, yes.

Q. Do you know whether the tobacco companies have done market research relating to individual smokers' -- strike the "individual" -- smokers' perceptions of risk?

A. Beyond this? I don't know of any other studies.

Q. Beyond what you have done?

A. Beyond these studies I know of no other studies.

Q. Do you know whether they have done any other assessment as to whether or not smokers

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would be interested in products which were described as safer?
MR. WAGNER: Object to the form.
A. I don't know about that, either.
Q. Well, let me make this simpler and save some type, hopefully. To the extent the tobacco companies have any kind of market research or internal survey work, it hasn't been shared with you other than the survey work we've talked about today?
A. Although in the Minnesota case I was handed documents by the attorneys on the other side and asked them to -- asked to read them into the record, and a number of those documents pertained to marketing studies done for the industry. Same thing happened in California.
Q. Right. But in those cases plaintiffs' counsel, I presume, were showing you documents that you hadn't seen before? No one from a tobacco company ever gave you that sort of data or information?
MR. WAGNER: Object to the form.
A. I don't recall reviewing such documents, but
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I may have as part of the Minnesota case. I'm not sure what I reviewed, from whom, for what purpose.
Q. All right. But you have no recollection of being given substantial amounts of marketing research data, for example, from a cigarette company?
A. As part of the Joe Camel litigation, I did receive an enormous amount of data, boxes of data regarding marketing studies and -- as well as research pertaining to Joe Camel.
Q. And what was the nature of the dispute over Joe Camel?
A. FTC wanted to retire Joe Camel.
Q. And what was your position in that litigation?
A. Joe Camel did not cause youth smoking, and youths were aware of the risks.
Q. And when were you providing those opinions?
A. This is in the month or two before the FTC dropped the case, so I testified over a two-day period. I forget when.
MR. STENGEL: I've got nothing further at this time.
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CROSS EXAMINATION

BY MR. BOAS:
Q. Good afternoon, Professor.
A. Hi.
Q. My name is Craig Boas, and I represent the plaintiffs in the National Asbestos Workers case. I will attempt not to be duplicative of the questioning which Mr. Stengel has gone over, so this should be very quick.

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The same ground rules apply. If anything I say is unclear to you, whether because you don't hear it or because of the manner in which I phrased it, please ask for clarification. If you answer a question, we will assume -- we will assume that you understood it.

Professor, when were you first contacted by the defendants with regard to the National Asbestos Workers case?

A. I'm not really sure, but my guess would be last spring, '99.

Q. Okay. Do you recall who contacted you?

A. Mr. Nemser.

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Q. And at that time did you become aware of the nature of the opinion which they would -- that they sought from you?

MR. NEMSER: Objection.

A. I'm not sure -- they didn't indicate anything regarding what they wanted my opinion to be. They only indicated that they wanted to use me as an expert pertaining to risk awareness issues.

Q. Okay. Do you know how much time you've spent preparing for this case since that time?

A. No.

Q. Okay. Are you familiar with the term "perceived personal risk"?

A. I'm not sure it's a term of art, but I've seen those three words go together in articles.

Q. And when you've seen it in articles, what has it meant, to your understanding?

A. Perceived risk to the individual.

Q. Does it differ from a more general perception of risk?

MR. NEMSER: Objection.

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Q. Actually, let me cure the question.

In the literature where you've seen it, has it been described as differing numerically from measurements of general risk?

A. The literature I've seen, which is typically by plaintiffs' expert in the cigarette litigation, claimants there's a difference. I'm not sure that there is any difference, and that's true even in some of their own writings.

Q. Now, when you say that you're not sure, does that mean that you are not convinced by that or that you have some basis or some study upon which to base your disagreement?

A. I disagree both on the basis of their research, as well as my research. So, for example, my research contradicts this claim, and also one of the articles by one of the proponents of this personal risk point of view has an article that undermines this

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claim for cigarettes.
Q. Well, first, in your own research, have you specifically undertaken to study personal
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risk?
A. All the risks that I deal with deal with personal risks, that I can think of. The question therefore seems overly broad.
Q. Would you agree that the wording of a survey questionnaire can have a marked result on the responses?
MR. NEMSER: Objection.
A. Depends on what the wording change is.
Q. You referred to an article by a proponent of the personal risk theory which you felt contradicted the concept that personal risk would differ from general risk?
A. For cigarettes.
Q. For cigarettes.
What author is that --
A. Paul --
Q. -- that you're referring to?
A. Paul Slovic. He's one of the plaintiffs' experts in the cigarette litigation.
Q. And which article are you referring to?
A. I don't recall the specific title, but I believe it's in the Journal of Adolescent Psychology.
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Q. And why do you contend that this article contradicts that theory?
A. Well, his data contradicts the theory. He concluded there's no difference between perceived risk to others and perceived risks to themselves for smoking. That's what his data showed. So he concluded this personal risk fable was false for cigarettes.
Q. Are you familiar with the term "optimism bias"?
A. I've heard people conjecture that there's optimism bias, yes.
Q. What do you understand it to mean?
A. As it's used by the proponents of this hypothesis, it's that people believe that accidents won't happen to them so that they don't believe that the risks will affect them.
Q. And do you believe that optimism bias exists, in fact?
A. No.
Q. In the surveys that we've discussed today -- that you've discussed today, I should say, have the questionnaires for any of those
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studies asked smokers what they felt their own risk were as a direct result of smoking?
MR. NEMSER: Are you just talking about the studies that Professor Viscusi has written about, the four that were identified, or are you talking about

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others?
Q. Just so I'm clear, why don't we limit it to those four, then.
A. '85, '91, '97, '98, those four?
Q. Uh-huh, yes.
A. These risks ask -- these risk questions ask people to rate the risk of smoking on a scale of 1 to 100, which is the scale I use for personal risks for my work for EPA, and I've shown with the statistical analysis that these risks do, in fact, affect behavior. So, yes, these are personal risk questions, in my view.
Q. But do the questions specifically ask the personal risk, or do they ask what the person thinks the risk is of certain behavior?
MR. NEMSER: Objection.

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A. They're rating the risk on a scale of cigarette smoking, and I find that this is a meaningful way to elicit personal risk beliefs. It's the same approach I use for the U.S. Environmental Protection Agency when I do studies for them.
Q. Hypothetically speaking, how, if at all, would your expert opinion change if people's perception of the personal risk attributable to smoking were different from their perception of the general risk?
MR. NEMSER: Objection.
A. Are we required to assume a particular direction of difference, a statistically significant difference?
Q. Well, first, let's just take it as I've asked it to you, which is to say assume that it is different.
A. Well, if it has the same mean value, you're going to get roughly the same effects.
Q. What if it is different in the direction that people actually have optimism bias?
A. Which is not borne out by the data reported by Slovic.

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Q. Which I understand that you disagree with.
A. Right.
Q. But assuming that optimism bias is, in fact, true, what would that do to your expert opinion?
MR. NEMSER: Objection.
A. Well, what do we mean by "optimism bias"? It is, in my -- my view is that the optimism bias questions do not elicit personal risk belief, so you can assume that the optimism bias questions elicit allegedly optimism bias results, but, in my view, that will have no effect on behavior. I've actually shown the opposite to be the case.
Q. Okay. Then let me expand on the hypothetical somewhat. Assume that the questions that you have asked elicit a

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measurement of general risk, and assume further that because of optimism bias people's perception of their personal risk is lower than that because they believe that things -- that bad things won't happen to them. You with me so far?

MR. NEMSER: If that's a question I

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can object to, I do object to it.

A. Survey evidence may indicate that they believe, but we reached a point of difference as to I don't think that these surveys capture true risk beliefs. So I'm not going to sort of buy into any changes in behavior elicited from the optimism bias questions, which, by the way, have never been shown to affect behavior.

Q. Are you familiar with your list of reliance documents in this case?

A. I reviewed them. I'm not sure I remember every document.

Q. I'm going to provide you with what I believe is the most recent list. I will ask you to confirm that. Do you recognize this document?

A. Yes.

Q. Can you tell me what it is?

A. It's a list of reliance documents presumably supplied by the attorneys in this case to you and the attorneys on the other side.

Q. Did you select the documents which would appear on this list?

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A. These are all things that have come up in my testimony from time to time. These are not all items that I think are reputable papers, but these are things that we might want lying around just in terms to have them from the standpoint of reference.

Q. Are you familiar with the concept of cumulative risk?

A. I've heard Professor Slovic hypothesize about this concept of cumulative risk, which I've also written about, that he does not understand. So you'd have to define what you mean by it because he doesn't understand what it means.

Q. I see.

MR. BOAS: It actually just occurred to me that I neglected to mark that with an exhibit number. What Viscusi exhibit are we up to?

MR. BSCHORR: We're up to --

MS. PHILLIPS: 27, I think.

MR. BSCHORR: 27 should be the next one.

MR. BOAS: Thanks. If I can have

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one of the...

(Discussion off the record.)

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(Document marked as Exhibit 27 for identification.)

Q. Do you believe that a high percentage of smokers see no health risk from smoking the next cigarette?

MR. NEMSER: I object.

A. The question doesn't mean anything. Paul Slovic doesn't even know what it means. What does a high health risk mean? What probability is that?

Q. Have you ever in any survey that you have conducted, meaning the four we've been discussing -- have you ever asked respondents what they perceive to be the relate risk from smoking the next cigarette?

A. No, I've not.

Q. Have you ever queried them to learn their perception of risk for smoking regularly for a few years?

MR. NEMSER: Objection.

A. The questions I've asked are the ones we've already gone over, lung cancer, total

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mortality and life expectancy.

Q. Have you ever measured if smokers accurately perceive their risk of becoming addicted to smoking?

MR. NEMSER: I object.

A. I have examined survey data gathered by the United States Government on people's risk perceptions with respect to cigarettes are a habit, an addiction or both, so I have analyzed the original survey data and concluded, based on this evidence, that there is widespread awareness of the cost of quitting smoking, and it's almost universal across all age groups.

Q. And when you speak of costs, you mean the economic costs in the sense that if you become addicted, then there is a cost associated with quitting?

A. The difficulty of quitting, so whether it's viewed as a habit, an addiction or both, so cigarette smoking is hard to quit in some dimension.

Q. Do you know at what age smokers typically begin to smoke?

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A. I'm not sure what it means to begin to smoke, because some people may try one cigarette as opposed to smoking regularly, so that trying one cigarette happens a lot earlier than smoking regularly does.

Q. Do you know at what age smokers typically begin to smoke regularly?

MR. BAILEY: Objection.

A. I don't know what you mean by "regularly," and I don't know what the -- if there's any specific age that jumps out at me.

Q. Okay. Well, you used the term "smoke regularly." What did you mean by it?

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A. So if somebody were smoking a pack of cigarettes a day, I would call that smoking regularly.
Q. Okay. Well, using your definition, do you know at what age smokers typically begin to smoke at that level?
A. I don't know at what age, but most of the people who smoke more than a pack a day are past high school age.
Q. And what basis do you have for that knowledge?

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A. University of Michigan monitoring the future survey reports information on cigarette smoking by youths. There's been a series of studies where I've got data on 12- to 17-year-olds, as well as people at various years of high school, and the smoking rates for a pack a day are less than the overall adult smoking rates.
Q. Have you reviewed the complaint in the National Asbestos Workers case?
A. Probably. I've reviewed a number of things, and it becomes a blur after a certain point, but I think so.
Q. So you wouldn't know when, if you have?
A. Right, or even if I definitely have. I probably have.
Q. Now, perhaps I can short-circuit a great many questions if I ask you, at length -- you discussed at length with Mr. Stengel this morning the materials upon which you would rely, the studies and so on, in the Falise case. Do you plan to rely on any additional information in The National Asbestos Workers case?

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A. Yes.
Q. Okay. What additional information do you intend to rely upon?
A. We went through a series of surveys, "The Mid-life Inventory Telephone Questionnaire," "The Mid-Life Development Inventory Survey," the "Harvard Survey of Health and Life Quality." They're all essentially part of one survey done for the MacArthur Foundation. So they would be included among the things that I would use affirmatively.
Q. Right. And for what conclusions would you rely on those specific studies?
A. That there's evidence that cigarette smokers are aware of the health implications of cigarettes to a greater extent than Dr. Cleary indicated in his article.
Q. Okay. Moving back just a moment to a question I asked you about optimism bias, you said that was contradicted by your work?
A. Yes.
Q. Can you name any particular article or other publication in which you discuss why that theory is not true, in your opinion?

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A. Well, two sets of things. First, in general if optimism bias is true, all these different risk beliefs would not affect behavior. They found this alleged optimism bias effect across the board for virtually every risk, and if their optimism bias hypothesis is correct, a risk belief should not alter economic behavior, then, in fact, it does alter economic behavior. I've shown this for job risks, product safety risks, and perceived risks as reported by the individual have the same kinds of effects on behavior as do objective measures of the risk, which is consistent with people responding to actual risk levels.

More importantly, we've tested the specific framing of these types of questions which at a rate your risks relative to the average person in a study we did for the U.S. Environmental Protection Agency and found that even though people give the optimism bias-type responses to these questions, when it comes to actually risk behaviors, they actually responded in an
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alarmist way and are very protective in situations where you get the optimism bias responses to the perceived risk question. So I view the optimism bias literature as being entirely an artifact of the framing of the questions.

(Document marked as Exhibit 28 for identification.)

Q. I'm going to hand to you what I've marked Exhibit 28, and this is -- well, can you identify this document?

A. This is my expert report.

Q. Do you intend to modify or amend this report between now and the date of trial in this case?

A. Not unless some issues come up and the attorneys tell me to do so. So I personally have no plans to do so.

Q. Does this expert report contain the entirety of the matters which you intend to testify regarding at trial in this case?

A. Depends in part on what your experts say, but if you don't put anybody on as experts, this would be the character of what I will
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say, although it doesn't go into the same level of detail regarding my four surveys as I would at trial.

Q. But other than that, it is your complete affirmative testimony?

A. This covers all the areas in which I plan to testify.

Q. Do any of the studies upon which you rely specifically consider the risk perceptions

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of blue collar workers?
A. They're included in the sample, and in the Massachusetts survey we have information on occupational group, and in the '97 national survey we have information on education levels, and I'd have to check whether we have occupational group information, but the results are robust across different groups.
Q. So based on those studies, are you able to state with confidence what the risk perceptions are for different occupations?
MR. NEMSER: Objection.
A. They're fairly similar across all occupations, controlling for the fact whether it's smokers versus non-smokers.
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I've looked at breakdowns of union versus non-union sample respondents. I've looked at breakdowns by educational level, and no matter what I've done, there seems to be uniformity in terms of the kinds of responses I get. So if I were asked to provide specific occupational breakdowns, I could do it, but only to the extent that I have data on that occupation. So, for example, we don't have asbestos workers as a category because there aren't enough of them in the country.
Q. You mentioned the Massachusetts study. You're talking about the one that you did for the Massachusetts state case?
A. That's correct.
Q. Okay. Now, you say in Massachusetts you did a survey of Massachusetts residents' risk beliefs, correct?
A. Yes.
Q. How come you chose to do a study in Massachusetts as opposed to extrapolating from one of the other studies that you've done?
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MR. NEMSER: Objection. Asked and answered.
A. This lawsuit was pertained -- that pertained to the Medicaid population, and in this case we had the opportunity to run a survey to get information pertaining to the Medicaid population. You don't always have that kind of lead time.
Q. So would conclusions that you draw be more accurate if you have the ability to survey exactly the population you're discussing?
MR. NEMSER: Objection.
A. You can do projections. It's not clear you always gain in terms of accuracy by doing a sample for the particular state, but there is emphasis in that state on using within state data for matters, not just the survey, but for other things as well.
(Pause.)
MR. BOAS: I have no further

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questions.
THE WITNESS: Good.
MR. BSCHORR: Professor Viscusi, you're not through yet.

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THE WITNESS: I don't have to go anywhere. It's okay.
MR. BSCHORR: Do you want to take a five-minute break?
MR. KRAUS: I think that would be a good idea. I'd like to.
THE WITNESS: Fine with me.
THE VIDEOGRAPHER: The time is 3:37. We're off the record.
(Recess taken.)
THE VIDEOGRAPHER: It's 3:57. We're back on the record.

CROSS EXAMINATION

BY MR. BSCHORR:

Q. Professor Viscusi, my name is Paul Bschorr. I represent the Blue Cross and Blue Shield plans in the case they have against the tobacco industry. Are you familiar with that case?
A. Yes.
Q. Have you read the complaint in that case?
A. I may have read one complaint. I don't

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recall when, but I believe I've read a complaint, yes.
Q. So you basically have a general understanding of the allegations that we've made in that case?
A. It's been a while, so my general understanding you're trying to obtain money from the cigarette industry.
Q. Anything else you understand about the case other than we're trying to obtain money from the cigarette industry?
A. I forget the specific allegations. After a while they become a blur from case to case.
Q. And I take it they're not particularly important to you for the purposes of your opinion?
MR. KRAUS: Objection.
A. For the purposes of my opinion I'm being asked to comment on my research, and it's up to the lawyers to figure out is this pertinent to the case or not.
Q. When were you first retained by anyone on behalf of the tobacco industry with respect to the Blue Cross case?

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A. I'm not sure of the exact date. Either last spring or last summer --
Q. And who --
A. -- I believe.
Q. -- who contacted you initially?

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A. Amy Phillips.
Q. And do you recall what Amy Phillips asked you to do at that time?
A. I don't think she asked me to do anything. She just told me that there was a case involving Blue Cross/Blue Shield and asked if I wanted to be involved to comment on my work on risk awareness.
Q. Now, with respect to your work on risk awareness, the book you've written, Smoking, Making a Risky Decision, describes basically your view on that subject, does it not, risk awareness?
A. It describes much of the research that I had done through 1992, but I've done work since then as well.
Q. Okay. Fair enough. But through certainly the date of the book it captures your views of risk awareness as it relates to the

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smoking question?
A. I characterize my work as evidence on risk awareness as opposed to personal beliefs, so it's not views that I'm reporting, it's data.
Q. But it is your interpretation of that data, is it not, sir?
A. It's my anal --
MR. NEMSER: Objection.
A. It's my analysis of the data, and I report the data itself.
Q. Your analysis would mean your interpretation of the data?
MR. KRAUS: Objection.
MS. PHILLIPS: Objection.
A. No. Interpretation might be I see a number, and this is what it means. That would be an interpretation, but presenting the number is not an interpretation. It's presenting data.
Q. Do you have any understanding of what the actual risk is of someone dying of lung cancer because of smoking?
MR. NEMSER: Objection.

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A. I have not undertaken an independent investigation of that, but I have reviewed evidence in the Surgeon General's reports, as well as the related medical literature.
Q. And what is your understanding based on whatever it is you've reviewed?
A. Well, these publications did not give probabilities, but I have converted their estimates to probabilities, and I would have to get a look at my book to get the exact numbers, but I believe they're in the range of something like 6 percent to 13 percent, would be the risk in the literature for 1991 on.
Q. And how about the risk with respect to all diseases, persons dying from all diseases

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because of smoking; what was that real risk?
A. The --
MR. NEMSER: Objection.
A. Yeah, once again, it's not real risk in the sense that we know the true reference point, but based on the estimates in the scientific literature, it's in the range of one-sixth to one-third probability.
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Q. And I take it you have no reason, sitting here today, to disbelieve those assumptions, do you?
A. I have taken the statements in these reports at face value. That doesn't imply that I accept them as being exact estimates. I indicated earlier today, perhaps you weren't here, that there are many things that I would have liked to have included in the analysis that they did not include which could affect your estimates of the risks, factors correlated with smoking behavior, but I'm not here to quarrel with the estimates. From the standpoint of my testimony I will accept the Surgeon General's estimates as the scientific reference point and then move on.
Q. And I take it for the purposes of your analysis and opinion that smokers overestimate the risk, you're comparing that to the actual risk that the Surgeon General report -- Surgeon General's reports have given; is that correct?
A. And similar government studies that I cite
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in my book, yes.
Q. Yes. Okay.
Now, in your book at Page 19 -- in fact, do we have Exhibit -- I think is it Exhibit 2?
MR. WAGNER: I'll get it for you.
Q. Turn to Page 19, please. You have a section that -- actually, it's on Page 18 that begins with the heading "The debate over smoking behavior."
Do you see that?
A. Yes.
Q. And you in that section describe three perceptions, three principal perceptions of nonsmoking behavior, correct?
A. I don't describe these as perceptions. They're three different perspectives that one might take, or hypotheses, so these are not perceptions.
Q. All right. Using your word, "perspectives," one is in shorthand, "rational smoker"; is that correct?
A. That's correct.
Q. And another one is a stylized smoker?
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A. That's correct.

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Q. And a third is the smoker with cognitive limitations?
A. That's right.
Q. Now, is it your understanding that all smokers fit into one of those three general patterns or perspectives?
A. I don't think I made a determination regarding, you know, sorting out people among these categories. That was not the intent of the study. These were just reference points in terms of how you might characterize how people think about risk.
Q. But in setting this forth, was it your purpose in setting this forth to indicate that different smokers could fit into one of these three perspectives?
A. No, that's not the purpose. These are different viewpoints that you might get from the literature. So, for example, the stylized smoker would be the view of some of the antismoking advocates. This is not to say that anybody fits into that category. This may be a misconception on the part of

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the antismoking groups. So the fact that I list these groups does not imply that anybody's in that category.
Q. Do you believe there's anyone in the category of the rational smoker?
A. There are probably some people in this category, yes.
Q. Would you say there were some people in the category of stylized smoker?
A. Yes.
Q. And will you also agree that there are probably some people in the category of smoker with cognitive limitations?
A. Wait. Excuse me. I'm sorry. I'm agreeing -- I was jumping to the wrong -- I'm agreeing with smoker with cognitive limitations, but I'm not agreeing with the stylized smoker.
Q. I see. So although you have all three here, you only agree that a smoker could be in one of those two categories and could not be a stylized smoker; is that right?
MR. NEMSER: Objection.
A. These are not categories. Let's go over

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these again. They're not categories, they're not bins we're putting people into. These are different viewpoints expressed by various commentators on smoking, so the stylized smoker would be a viewpoint as opposed to a category.
Q. Well, I just asked you a moment ago whether or not there were smokers who would fit under the category of rational smoker, and you answered yes.
A. There are people that probably respond rationally in this instance.

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Q. And does that mean that there are also going to be people who respond irrationally?
A. "Irrationally" being people with excessive perceptions of the risk, yes.
Q. And that could be a stylized smoker or a smoker with cognitive limitations, the two extremes?
A. Well, the evidence I found is in support of cognitive limitations, so based on my results, you would reject the stylized smoker hypothesis. That's the purpose of the analysis, to show how people perceive
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the risk.
Q. Now, where in your article do you say that you reject the stylized smoker?
A. Well, under "assesses smoking risks," boom, we reject that because the average risk perception sample is 37 percent for the 1985 Audits & Surveys data for lung cancer, and the true risks as estimated by the Surgeon General were 6 to 13 percent, so you reject the hypothesis of underassessing smoking risks.
Q. On that basis, then, everyone would be in the smoker with cognitive limitation category; isn't that true?
A. In terms of the mean response of the smoking population, that's where we would put the mean respond in, yes.
Q. Do you recall that in your actual survey down in North Carolina you had some smokers respond with a risk that was below what the Surgeon General said was the real risk?
A. I don't recall that.
Q. You don't recall that?
A. No.
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Q. If you'd get Exhibit 16, I believe you indicated in response to Mr. Stengel's questions that this was something that was faxed to you when you were in Minnesota and was what was left of the various actual questionnaires that you used in your Chapel Hill -- Chapel Hill Durham study, correct?
A. These typically were not the questionnaires used in the final survey. These were the questionnaires used in the pretesting.
Q. Well, if you would look at a person named Jenifer Severns. Unfortunately, these are not numbered, but they're about, I would say, 15 pages back. Did you find the one?
A. I did.
Q. And am I correct that in 3A she answers that three out of 100 smokers would likely die from lung cancer because they smoke?
A. Right.
Q. So that person is on the low end, lower than the Surgeon General, correct? That's one example, is it not?
A. She's never smoked cigarettes, but, yeah,

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there would be some people who would answer
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below the Surgeon General's answer.
Q. Incidentally, in your two questions, one with respect to the number of people that die as a result of lung cancer and those that die of all diseases, would you normally expect that whatever the percentage was for lung cancer, the percentage would be higher for all diseases?
MR. NEMSER: Objection.
A. It would be a very unusual survey in which all responses were consistent across questions in that manner.
Q. So in other words, there can be inconsistencies among the answers, correct?
A. In any survey there's the potential for inconsistent --
Q. And how --
A. -- responses.
Q. -- did you deal with those inconsistencies in your analysis of the survey?
A. I think you talked over my answer just before, by the way.
Q. I don't think I did, but go right ahead. I'm sorry.
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A. I forgot the question.
Q. How did you take into account those inconsistencies in your analysis of the data?
A. For which data?
Q. The data from the North Carolina study, the telephone survey that you indicated you had done for you?
A. What I did is note that in situations where people underestimated the lung cancer risk, for example, did they underestimate the mortality risk? And generally low risk perceptions on one were counterbalanced by high risk perceptions on the other. But in terms of what I reported, I reported all the results, so I didn't throw out any observations.
Q. So in other words, you reported the result of someone who might have said that the result -- the risk for lung cancer was 10 percent and yet the risk for all diseases, including lung cancer, was only 5 percent?
A. I don't recall that happening, but if it did happen, I would have reported all the data
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as opposed to throwing people out.
Q. All right. In other words, you did not take into account the issue of inconsistency in answers?
MR. KRAUS: Objection.
MR. BAILEY: Objection.
MS. PHILLIPS: Objection.
A. I'm not aware of any inconsistency that

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occurred in the sense of people giving a total number of people dying from lung cancer that was higher than the total number of people dying from all mortality risks.

Q. You don't want to look at that Exhibit 16 and check that out, do you?

MR. KRAUS: Objection.

A. Do you want to show me -- I'm happy to look at Exhibit 16.

Q. Find Melanie Miller? You're probably a little further back than the one we were just looking at.

A. Yeah, I see one, 10 percent, 5 percent of the 1,000 question?

Q. Uh-huh.

A. Yeah, this is not the data set I analyzed,

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so she may have been confused by the 1,000 denominator.

Q. But certainly 5 percent is less than 10 percent, isn't it?

A. That's certainly right, but this is not the data reported in my book.

Q. The data reported in your book only dealt with the question relative to 100 smokers, correct?

A. As well as the life expectancy question which is not in this pretest survey.

Q. Right. Now, you indicated in response to Mr. Stengel's questions that the Audit & Surveys survey in February 1997 was something that you received only after it had been done and you had no input in it; is that correct?

A. That's correct.

Q. However, with respect to the 1998 study -- 1997 study, I'm sorry, did you have any input in that one, the 1997 one?

MR. NEMSER: It's asked and answered.

A. That's what you just asked, and the answer

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is no.

Q. No, I said -- and I -- I'm sorry. I think I -- I'm sorry. The 1998 study of Roper and Starch, you did have input in that?

A. Yes.

Q. Now, you indicated that that input included looking at the questions and determining what were the appropriate questions to ask; is that correct?

A. Drafting the questions, working directly with Roper Starch.

Q. All right. Do you accept the principle, as far as the survey, that a person's answers can be preconditioned by the ordering of the question?

A. Depends on what questions they are, but the structure of the survey can affect subsequent responses depending on what you tell people before a particular question.

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Q. Did you take that into account with respect to the formatting of any of the questions either in the North Carolina study or in working with Roper Starch?
A. I knew of no biases arising from the
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question ordering, but I wanted to demonstrate that changing the order would not alter the results.
Q. Now, in each of the surveys the question at hand always has the word "because," quote-unquote, "because," underlined. Is there a reason for that?
A. Well, respondents don't see a written version of the survey. This is for the telephone interviewer, so it's to highlight the fact that we were dealing with risk beliefs conditional upon smoking as opposed to risk beliefs more generally.
Q. So in other words, this would be basically a sign to the telephone surveyor to emphasize the word "because" --
A. First of all --
Q. -- in reading the question?
A. -- I would want to review all the different surveys to make sure that your previous statement was true that it's always underlined. I don't know that's the case, so if you want, I'd like to take a look at them first.
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Q. Please do so.
A. On my surveys it's not underlined. '91 it's not underlined, and the '90 -- '85 Audits & Surveys it's not underlined.
Q. How about the '98 one?
(Witness reviews document.)
A. It's underlined in '98.
Q. Might as well pick up '97 as well.
A. It's underlined in '97.
Q. And my question is, is there any significance of the fact that it's underlined in those two as opposed to, as you indicated, not underlined in the other two?
A. I know of no significance other than to make sure that the survey person extracts information regarding smoking behavior as opposed to risk beliefs that do not pertain to smoking.
Q. You have the 1998 survey there, the Viscusi 5?
A. Yes.
Q. Okay. Turn to Page 12. This is just a small point, but I just want to be sure I
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understand it. Where it describes the mean estimated and median estimated, the word is "age." Is that the correct way to describe that since the question is, out of every 100

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smokers, how many do you think would die from lung cancer because they smoke?
A. I assume they mean response, but this is not my analysis.
Q. But you've read this before, I take it?
A. I read -- I didn't actually read their report. I did my own analysis using the raw data.
Q. You've never read this report until today?
A. I've never read it cover to cover, no. I always do my own analysis.
Q. So in any event, you never noticed that --
A. No.
Q. -- word "age"?
A. No.
Q. Okay. Now, in your book on smoking, Exhibit 2, you refer to small risks and large risks. How would you characterize the risk of dying of --
MR. KRAUS: Is there a
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particular -- I'm sorry to interrupt.
Q. It's all the way through. You could look at Page 9, you could look at Page 20, that will help you, but I think you probably know what I'm --
A. I know this effect, yes.
Q. You know it's in there, right?
How would you describe or how would you characterize the risk of dying from lung cancer, small risk, large risk or something else?
A. Due to smoking?
Q. Uh-huh, due to smoking.
A. I would say it's a fairly large risk.
Q. Large risk.
And that is based on what?
A. Estimates from the Surgeon General and National Cancer Institute.
Q. In other words, the 6 to 13 percent that you indicated before, that's a large risk to you?
A. Yes, it is.
Q. Now, you've also indicated, I believe, in response to Mr. Stengel's questions that
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there's a lot of literature, articles, et cetera, that are out there talking about that risk that are available to the public, correct?
MR. NEMSER: Objection.
Q. Do you recall that testimony?
A. There are a lot of articles on smoking, if that's what you mean.
Q. Smoking and risks of smoking and things like that; is that right?
A. There are, but they generally don't talk about probablys, they talk about the number of people who die from smoking.
Q. Would you agree with me that the risk of getting cancer is a significant fear to the

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American public?
MR. NEMSER: Objection.
A. I'm not sure what it means to be a significant fear. People don't like the idea of getting cancer, so that's not something that would be viewed favorably. So if you heard you were getting cancer, that would be viewed very adversely.
Q. But would you agree that people have a fear
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of getting cancer?
A. Economists don't use that terminology to raise that on a paper called "Hopes and Fears," but that would be with respect to risk ambiguity as opposed to this kind of effect.
(Pause.)
Q. Would you agree that a person in order to appraise the relative risks of a particular situation needs to have information about it?
MR. NEMSER: Objection.
A. I would assume in general you would have to know something about any risk exposure to be able to assess a risk, because if you don't know what it is we're talking about, how can you assess a risk?
Q. How in any of your surveys that you've worked on did you take into account and satisfy yourself that the persons that you were asking the questions of had sufficient information?
MR. NEMSER: Objection.
A. Well, we made clear that the risks pertained
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to smoking, and the way you asked the question before, if we didn't tell them what the risk was about, we had to say, "We ran a survey. We're not going to tell you what the risk is, but you have to guess how many out of 100 people will die from this, but we're not going to tell you what it is." That would be something where we withheld the information. We also define the outcome that we care about, so rather than saying something like "This is going to leave you in ill health," we tell them "This causes cancer," or what's the risk of it killing you. So we have a well-defined outcome as well.
Q. And I take it from that answer that you believe you satisfied your testing to understand at that they had enough knowledge to answer the question based on the question you asked; is that correct?
MR. NEMSER: Objection.
MR. KRAUS: Objection.
MR. BAILEY: Objection.
A. I've asked the question a number of
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different ways and gotten very similar responses so that I'm confident that the general result regarding overassessment of the risk holds true.

Q. Now, in your report in our case, the Blue Cross case, you indicate that -- and this is the top of Page 2.

MR. KRAUS: I don't think the --

A. I don't have it.

MR. KRAUS: -- witness has a copy of that in this deposition.

MR. BSCHORR: Do you have a copy of it?

MR. WAGNER: Not of the Blue Cross opinion, no.

MR. BSCHORR: Well, look at -- it's the same. It's actually the same for purposes of this deposition as the one that's been marked "Financial Asbestos." Do you have that one?

MR. WAGNER: I'm sure we do.

MR. WAGNER: 28.

MR. BSCHORR: 28?

Q. I believe if you look at the top of Page 2,

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you see there's a paragraph that begins, "To explore the robustness of these findings"?

A. Yes.

Q. Just before that the preceding paragraph concludes, "People substantially overestimate the risk of lung cancer and lung cancer mortality compared to estimates based on reports from the Surgeon General."

Do you see that?

A. I do.

Q. Now, the estimates based on the reports of is Surgeon General, is that the real risk we were talking about before or something else?

MR. NEMSER: Objection.

A. It's my scientific reference point. I'm not sure they're real risks, but this is the scientific reference point.

Q. But it's the reference point in the Surgeon General as to what the risks of lung cancer deaths are among smokers?

A. Along with the National Cancer Institute and my adding a denominator to convert them to probabilities.

Q. Now, I understand that you don't believe

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that there is any issue of optimism bias that would have any impact to you, previous testimony you've given here today. Do I accurately state that?

MR. NEMSER: Objection.

A. I don't believe the results in the optimism bias literature generally.

Q. All right. Have you done anything personally to test that premise by way of surveys yourself?

A. Yes.

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Q. What have you done?
A. Ran a survey for the U.S. Environmental Protection Agency on these issues with respect to household risks.
Q. And where is that reported?
A. It's in my book published by Harvard University Press, Learning About Risk.
Q. Okay. Have you done anything in that regard with respect to smoking?
A. No, because I've already rejected the hypothesis of optimism bias as a result of a framing effect, so that there's no reason to ask the question incorrectly that would

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create a framing effect bias in terms of the response.
Q. In other words, based on your analysis in the environmental area, you have concluded that there could be no optimism bias anywhere with respect to a survey result, correct?
MR. NEMSER: Objection.
MS. PHILLIPS: Objection.
A. What I've concluded, based on this survey, is that the entire optimism bias literature, which rests on a similar type of question formulation, with the exception of the Paul Slovic piece I mentioned earlier, creates an artifact that's simply not true, which I demonstrated in that study. So given the fact that we know that the question is not a valid way to elicit risk beliefs, there's no reason to mimic asking the question incorrectly in the smoking contest -- context.
Q. Okay. In other words, you were satisfied, based on the work you had done in the environmental area, that there was no need

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on do an optimism bias check with respect to smoking, correct?
A. We're not talking about an optimism bias check. We're talking about a survey methodology that I've rejected as being valid, so there's no reason to repeat an invalid survey methodology.
Q. All right.
A. And also, I have evidence reported in my book which indicates that these risk perceptions do affect behavior, and this is not only true of cigarettes, but I've shown this in a wide variety of contexts involving consumer product risks, job safety risks, all of which would undermine the position in the optimism bias literature taken by those researchers.
Q. But, in fact, you have never done any study yourself geared towards smoking with respect to optimism bias, correct?
MR. NEMSER: Objection.
A. Once again, I have to take issue with you

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for the reasons I've just stated. Given the fact that I have shown that risk beliefs do,

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in fact, affect smoking behavior, which is contrary to what would be claimed by the optimism bias researchers, that I have, in fact, studies this behavior for smoking.

Q. Where have you studied it in smoking as opposed to in the environmental area?

A. It's in my smoking book, for example, where I show that smokers risk beliefs affect smoking behavior.

Q. Where is that in the book?

A. There's a whole chapter on that. I don't have --

(Witness reviews document.)

A. Chapter 5 and Chapter 6 both deal with that.

Q. And those two chapters deal with your analysis of the issue as opposed to any surveys you've done to confirm that in the smoking area, correct?

A. I'm not sure I understand that question.

Q. Well, you said before that -- when I asked you whether you had ever done any testing of this issue, you said yes, you had done it in the environmental area, and you had

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confirmed in the environmental area that it didn't apply.

A. No. I confirmed in the environmental area that that question wording was an invalid way to ask risk perception questions, so that I've shown that this is an invalid methodology, and the lack of validity would carry over across all domains. I'm not limiting it to that one.

Q. Okay. But in any event, you haven't -- you carried it over from that domain to smoking, you haven't done anything specifically with respect to smoking in that regard, correct?

MR. NEMSER: Objection.

MS. PHILLIPS: Objection.

Q. It's a yes or no.

MR. KRAUS: Objection.

A. Once again, within the smoking area I've examined the effect of smoking risk beliefs as elicited in my survey on smoking behavior, and if what is claimed in the optimism bias literature is true, there should be no relationship, whereas, in fact, there is a strong relationship between

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smoking risk beliefs as stated in the surveys and the probability that people smoke.

Q. Have you ever done a survey in the smoking area in which you asked the question of whether the person being -- the respondent had any belief that they, themselves, would

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die of lung cancer?
A. I asked these questions because these are the types of questions I've used for EPA and actually getting at in a meaningful way people's risk perceptions. These are the way -- this is the way I would ask the question in the EPA surveys. It's the way we present risk information in the EPA surveys. So I view this is doing exactly that. This is eliciting personal risk beliefs.
Q. Now, I just want to be sure though, that you had indicated before that in connection with the North Carolina survey, you had experimented with a number of different ways of asking a question, and there are some of them that even show in Exhibit 16 that
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2,000, 1,000, things like that. I want to be sure. Did you ever frame a question, even on an experimental basis, to test what the answer would be if the question was, what do you believe is your risk, your personal risk of dying of lung cancer because of smoking?
A. I don't view that as a natural way to ask the questions, and that's why I didn't do it.
Q. So you didn't do it? Thank you.
A. Didn't do that.
Q. Thank you.
Do you believe there is any difference from the purposes of the validity of a survey between asking a person whether they've ever heard whether X is true as opposed to whether they believe X is true?
A. Having heard a statement does not necessarily mean you believe it.
Q. And which is more likely to affect behavior?
A. Well, I'm not sure what it means to believe something is true in terms of these surveys. Since we never asked that
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question, do you believe that this is true, what matters is what influences risk beliefs, so hearing something but not believing it could affect behavior if what you heard is very powerful in terms of the message.
MR. BSCHORR: Could I have that question read back -- the answer read back, please?
(Record read.)
MR. BSCHORR: Thank you.
Q. Professor Viscusi, you just used the phrase "risk beliefs" in that answer. Do you recall that?
A. Yes.
Q. Now, what did you mean by "risk beliefs"?
A. Perceived probabilities for different outcomes.

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Q. And that would be a personal belief of the individual?
A. Subjective risk perception, yes.
Q. Right. That would be something different than whether they've heard of a particular event, correct?

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A. It could be, yes.
Q. But, in fact, your surveys do not ask about personal belief; is that correct?
MR. NEMSER: Objection.
MR. KRAUS: Objection.
MS. PHILLIPS: Objection.
A. I believe that my risk perception questions do get at that. The questions in the survey, have you heard various statements about cigarette smoking, do not ask about risk belief for those particular statements. That's different.
Q. You referred on a number of occasions in your earlier testimony to Professor Slovic. Do you know him personally?
A. Yes.
Q. You referred to him as a plaintiffs' expert?
A. He was in the cigarette litigation.
Q. Who else would you categorize as a plaintiffs' expert in the cigarette litigation that does survey work or similar to what you do?
A. Well, I don't think any of these people do work that has exactly the character of what

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I do, so I don't view there being any counterpart to me on the plaintiffs' side.
Q. I will accept that. I would assume you would say that. But my question is, with respect to Professor Slovic, you referred to him as a plaintiffs' expert in the cigarette litigation.
A. Yes.
Q. Are there any other individuals who do survey work, whether or not you think it is good or not, that you would also put in that category, plaintiffs' expert in tobacco or cigarettes?
A. Weinstein, Cleary. I'm not sure how much he's actually done the survey as opposed to analyzing the survey, but I know he's involved in one or two of these cases. These are the people that come to mind most immediately in terms of people who have actually run surveys or analyze survey data.
Q. Would it be fair to say that you're a defendants' expert in the tobacco litigation?

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A. I haven't been asked to testify on behalf of plaintiffs to date, but thus far I've only served as an expert for the defense.

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Q. Let's talk a little bit about that. I believe you said beginning sometime in the 1980s, you thought it was after the 1985 Audit & Survey report, you became involved in working with the tobacco industry?
MR. NEMSER: Objection.
Q. Is that correct?
A. During the 1980s, I did consult to Jones, Day, not directly to the industry, on risk beliefs.
Q. Could you pinpoint a time in the 1980s?
A. I was still at Northwestern, so it was before I moved to Duke University. So if I had my resume, I'd be able to figure this out.
Q. Well, I'm sure we have one there.
A. So it was before 1988.
Q. And would it also be fair to say after 1985 because of the Audit & Survey report of 1985?
A. That's correct.

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Q. So at some time in that time period you would have been retained by Jones, Day?
A. That's correct.
Q. And for what purpose were you retained?
A. To consult with them on personal risk beliefs generally.
Q. In connection with litigation or for some other purpose?
A. Just general consultation. The backdrop was the cigarette litigation, but I was not named as an expert. There was no prospect of me being named as an expert. It was simply to discuss what people knew about risk beliefs.
Q. Did you have any understanding of what Jones, Day was doing at that time as far as its representation of anyone in the tobacco industry?
MR. BAILEY: Objection.
A. Well, I did know that they were involved in the litigation. I believe they work for R.J. Reynolds.
Q. So you understood at that time that they were retaining you in connection with their

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representation of RJR in litigation, correct?
MR. BAILEY: Objection.
A. I'm not sure that there is that much of a link to any litigation. I think they just wanted me to inform them generally about what the literature was on risk beliefs, and it went much beyond smoking. It was risk beliefs generally.
Q. It went beyond smoking?
A. Yes. In fact, most of my research up to that point had been on job risk beliefs.
Q. Did you do any specific survey work in connection with that engagement?

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A. No.
Q. So you just basically advised them with respect to what you had done in the past up to that point?
A. Told them what I knew based on the literature as well as my own work.
Q. How long did that engagement last?
A. I don't know. I may have made a couple of trips to Cleveland, but it was certainly -- I think it was over by 1988. That would be
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my guess.
Q. And by the time you went to Duke you think it was over?
A. I don't recall doing any work for them after I went to Duke before, you know, this latest waive of things started happening.
Q. Approximately how much time did you spend on that project in the 1980s?
A. I don't recall, but I believe my bills are public record.
Q. Where would one go to find those documents?
A. The Minnesota documents. To the extent that they exist, they exist in the Minnesota archives.
Q. Okay. Now, when were you next engaged by anyone on behalf of the tobacco industry?
A. Well, somewhere in there I was engaged directly by R.J. Reynolds for the Premier cigarette warning, which I mentioned.
Q. Uh-huh.
A. And then it was not until the mid-1990s, I'm not sure when, that I began doing any work, so there's a long period of time when I did no work of any kind for the tobacco
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industry.
Q. Well, at some point you did some work on -- with the FTC on Camel? When was that?
A. That was within the past couple of years, maybe about a year ago, year and a half ago.
Q. I take it the 1991 work that you did was Duke, Durham and North -- and Chapel Hill residents. Was that shared by you with the tobacco industry?
A. Not at the time. In my book, it's included in my book, but I did not send any of it, you know, to them, except I sent them a copy of my book.
Q. And I take it from that answer you did not have any discussions with anyone on behalf of the tobacco industry as you went through the process of doing that survey?
A. No. They didn't even know I was doing it.
Q. Now, work you would have done up to the time that the Minnesota trial came along, is it your testimony that bills submitted to the tobacco industry or to lawyers representing the tobacco industry are all in the
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depository?
A. No. What I was saying is that the bills to Jones, Day, to the extent that they exist at all, now exist as part of the Minnesota records.
Q. You don't know if they even exist in the Minnesota records, do you?
A. I saw some bills in the Minnesota records.
Q. Now, other than the Jones, Day bills, are there other bills that you believe are also in the Minnesota depository?
A. I don't know. I didn't go through everything.
Q. Okay. Where would one have to go to find the additional bills that you have sent to the tobacco industry?
A. Well, I don't keep every bill I've ever sent to the tobacco industry, so you might want to ask them if there are archives that include all the old bills.
Q. Well, do you have any of them?
A. I have some of the recent bills, yes.
MR. BSCHORR: I would request that they be produced.
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MR. BAILEY: We'll take it under advisement.
MR. BSCHORR: Thank you.
Q. Now -- and to the extent that Minnesota is separate, we'll leave it separate, just as I understand it. There was an issue there.
You became more involved again with the tobacco industry at approximately what year in the 1990s?
A. I don't recall. Mid-1990s. I don't know when.
MR. NEMSER: I'm going to object to the form of that.
Q. If you look at the list of cases that you have appended to your expert report, would that refresh your recollection?
A. I don't know if I list the years, so I'm not sure it would help.
Q. No, you don't list the years, but you list a number of state cases, state AG cases?
A. That's correct.
Q. Does that in any way refresh your recollection as to when you became involved?
A. Well, those are all fairly recent, you know,
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the past four years.
Q. The past four years? Time flies, I realize, but...
A. Past four years I think for the state AG cases.
Q. So you believe you were only retained by no earlier than 1986?
A. Might have been '95.
Q. Might have been 1994?
A. Might have been '94. I doubt if it was

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'93.
Q. There is a case called Barns, William Barns in Pennsylvania. Do you recall that case?
A. I do.
Q. When were you retained in that case?
A. After I came back here, so that would be two to three years ago.
Q. The listing you have there, are they listed in chronological order, or how did you decide to list them in the order in which you did? If you look at the Viscusi case list --
MR. WAGNER: We don't have that one.
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MR. BSCHORR: Oh, I'm sorry. Why don't you look at my copy.
A. They're just there.
Q. They're just there?
A. We are not summer -- we're trying to add to them chronologically, but the original list was just a dump of whatever we could find in no special order, and they got shuffled depending on which files and which lists I was working off of, so these are updates of case lists, so there's no real order to this.
Q. Thank you?
MR. STENGEL: I'll take that back, please.
Q. You indicated earlier today that you're in the process of writing another book relative to smoking?
A. That's right.
Q. Just for ease of reference, does it have a title yet or not?
A. It's listed on my CV as Smoking Math.
Q. Smoking Man?
A. Yeah, but the title is still in flux.
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Q. Is there anything in that book that you intend to rely upon with respect to -- or that draft book that you intend to rely upon in your testimony?
A. No, I have nothing in there that I would rely upon beyond what I've already handed over.
Q. Well, I'm not sure I understand that. You haven't handed over the draft book, I don't believe.
A. No.
Q. And my question is whether there's anything in that draft that you've worked on that you would intend to rely upon in your testimony.
A. Nothing that hasn't appeared elsewhere.
Q. Well, is there anything in the book that hasn't appeared elsewhere?
A. Yes, but I'm not going to be relying on that.
Q. Is it relating to smoking?

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A. Yes. The whole book is about smoking.
Q. Is it relating to risk perceptions?
A. Yes.
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Q. Are you testifying about risk perceptions?
A. Yes.
MR. BSCHORR: I would request a draft of the book.
MS. PHILLIPS: We'll take it under advisement.
MR. BSCHORR: And I'll be happy to keep it confidential, but I think for the purposes of this litigation I'm entitled to it. And we'll -- as I say, happy to keep it under whatever protection is appropriate.
Q. Going back, sir, to the work you did for the Attorney Generals -- Attorney General cases for the tobacco industry or lawyers for the tobacco industry, did you, as you recall it, bill the lawyers involved on a hourly basis?
A. Yes.
Q. I wasn't sure exactly whether I heard how you bill on an hourly basis. You said something about half a day is treated is a full day? How does that work in your billing?
A. I wish that were the case, but it's $550 an hour for work. If I'm deposed and it only
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goes for half -- part of half a day, you get billed for a half a day. If it's part of the morning and part of the afternoon so it goes over to the afternoon, so if we were to leave, let's say, at 10 minutes to five today instead of 5 o'clock, then they're still billed for the full day, because -- for a deposition or testimony but not for work.
Q. Okay. And a full day is what, eight hours?
A. Eight hours.
Q. Okay. And in addition to that, you would bill for any work you would do to either prepare for your testimony or other analyses you may be doing on behalf of the tobacco industry; is that correct?
A. Yes, but there's no billing for my book, so -- but, you know, so all of my research --
Q. I would --
A. None of my re --
Q. I would hope that was the case, and I wasn't even going to ask you that.
A. None of my research is billed out, only my
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work for the case.
Q. Okay. How much have you billed in the last year?
A. I don't know.
Q. And how would you go about finding that out, the billing records?

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A. Look at billing records.
Q. Okay. Wouldn't you also have for purposes of your tax returns information going back over the years as to the amount of consulting work you've done for the tobacco industry?
MR. NEMSER: I object that this is going back over the same material Mr. Stengel just went over.
MR. BSCHORR: I don't think we talked about that specific issue.
MR. NEMSER: I think we did.
MR. BAILEY: I think we did.
MR. NEMSER: That precise issue. And note my continuing objection vis-a-vis National Asbestos to this entire line of questioning, please.
A. I do keep some records for a period of
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time. I'm not sure how long I have records for, so, for example, my pre-move records from four years ago are pretty spotty.
MR. BSCHORR: All right. To make this simple, sir, I will request production of whatever records you have, be they billing records, if it's a portion of your tax records, I'm not interested in the rest of it, that indicates, going back in time, the amount of compensation you've received as an expert for the tobacco industry. And I'll be happy to take that in a -- just a simple number, your representation that it's accurate or if you want to give me the copies of the bills, that's fine, but that's what I request, okay?
MR. BAILEY: It's noted in the record.
MR. BSCHORR: I beg your pardon?
MR. BAILEY: I said it's in the record.
MR. BSCHORR: Oh, right.
MR. KRAUS: I'm just curious. Are you prepared to provide that material for
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all plaintiffs' experts?
MR. BSCHORR: I suppose when we get to that and you wish to make such a request, we'll have to deal with it, won't we, but right now we're dealing with Professor Viscusi.
MR. KRAUS: Well, you made the request, I think it's a fair retort, to find out how we might deal with your request --
MR. BSCHORR: Well, I guess --
MR. KRAUS: -- to find out what your position is.
MR. BSCHORR: -- I'll wait to see how you're going to deal with my request before I start retorting.
MR. KRAUS: Okay. I' like you to put -- at least in the Blue Cross/Blue

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Shield case I would like you to put requests such as the one you've just made in writing to us.

MR. BSCHORR: I don't have to do that. I've made it on the record, and it is in writing. Once you get the transcript, it'll be in writing as good as if I put

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another letter to you. Let's not take down more trees than we have to.

(Pause.)

Q. There was reference earlier to your testimony at an OSHA hearing?

A. Oh, I don't think there was.

Q. I thought there was. I thought there was, but maybe not.

A. I forgot about that.

Q. And then --

A. I forgot about that.

Q. I forgot about that. Well, I don't want you to forget about it, so let's just put that onto the record, too. I take it there was an occasion where you testified for the Tobacco Institute?

A. I testified for Covington & Burling (phonetic).

Q. And they represented the Tobacco Institute?

MR. BAILEY: Objection.

A. They may have been among their clients. I'm not -- I'm sure I got my check from Covington & Burling.

Q. And in any event, whatever you would have

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stated at that hearing as to the reason you were retained would have been an accurate statement, correct?

A. I would --

MR. KRAUS: Objection.

A. Whatever I said, I'm sure it was accurate.

Q. Are you aware of whether or not in the Blue Cross litigation there were any individual smoker depositions that are being taken?

A. I believe there are some individual smoker depositions.

Q. Have you been asked to review any aspect of those depositions, either the transcripts themselves or summaries or anything else?

A. I've seen portions of transcripts.

Q. Oh, you've already seen some?

A. Yes.

Q. Which ones have you seen?

A. I don't recall.

Q. Don't recall any names?

A. Believe it or not, I don't memorize names of people being deposed. That's just not something I memorize.

Q. How many have you read?

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A. Two -- or two documents. It could have been different pieces of the same deposition, but

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I've looked at two separate documents.
Q. Were these transcripts? I men, do they have the format of a question and answer?
A. Yes.
Q. And when did you read those?
A. Yesterday afternoon and last night.
Q. Is this something that the counsel for Tobacco working with you gave you to read?
A. They did.
Q. Did you have any understanding of why you were asked to read them?
A. I believe that I might be involved in these cases, so it is by way of background.
Q. Well, did you -- did anybody advise you that you might be called upon to comment in any way with respect to those transcripts?
A. Conceivably that could happen, but mostly it was just to let me know here's what's going on in this other area, and it might potentially relate to what I'm doing because people are talking about risk beliefs.
Q. Well, in your report -- and it's true as the
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National Asbestos, as well as in ours -- you indicate that you may also testify to issues related to plaintiffs' efforts to prove causation. Do you understand that those types of transcripts would go to that subject?
MR. NEMSER: Objection.
MR. KRAUS: Objection.
A. I'm not sure that they will be pertinent until I've had a chance to review all the transcripts and see the extent to which anything meaningful comes out of them for purposes of my testimony.
Q. You have read two of them, though?
MR. BAILEY: Objection.
A. I've read segments of two documents, so chunks out of two documents. It could be one transcript, two parts to it. But I've not read more than -- you know, it's under 100 pages that I've read.
Q. Just let me be sure. Were you given the full transcript and directed to read certain portions, or did you just get certain portions of these transcripts?
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MR. BAILEY: Objection.
A. I was given chunks. So I'm not sure what -- you know, I didn't verify what chunks I got or whether the deps continued or not. I was just glancing at them to see -- reading over them to see what kind of things were coming up.
Q. Did you make any notes?
A. No.
Q. Did you reach any conclusions based upon what you had read?
A. I didn't see any questions I wanted to mimic for purposes of my surveys based on what I

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read.
Q. Any other conclusions you reached other than whether it related to your survey or anything you might wish to do in your survey?
A. No. It seems that a lot of the questions were inspired by some of the things plaintiffs' experts may have written in various contexts.
Q. Is it fair to say you only read that portion that related to questions from plaintiffs'
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counsel?
A. No. I read portions from defense counsel as well.
Q. Have you had occasion to make any suggestions to any of the counsel for the defense as to any questions they should ask?
A. I have not.
Q. In the National Asbestos report, the amended report, you have reference to this MacArthur Foundation set of materials. It's not in our amended -- or our report which has not been amended. Is there a reason for that?
MR. NEMSER: I object to the form.
A. I don't know why, you know, attorneys would choose certain things as being pertinent to the case. These -- this survey does indicate that people are aware of smoking risks in a variety of ways, but in some cases I'm not relying upon it.
Q. Well, but you are relying upon it in connection with National Asbestos, I believe was your testimony earlier, correct?
A. And I believe there's a witness on the other side who's relying on it as well and who did
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the analysis that first called my attention to this data so that that was the way in which it came up.
Q. Well, now that your attention has been called to the data, are you relying on that report in any way with respect to any testimony you intend to give in our case, the Blue Cross case?
A. If it's not listed among my exhibits, presumably I'm not using it affirmatively, though it may come up depending on what your experts say.
THE VIDEOGRAPHER: Excuse me, counsel. We have to stop a moment to change the videotape. The time is 4:59. This is the end of tape No. 3. We're off the record.
(Discussion off the record.)
(Recess taken.)
THE VIDEOGRAPHER: The time is 5:09. This is the beginning of Video Cassette No. 4 in the deposition of Professor W. Kip Viscusi.
MS. PHILLIPS: And just before we

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start the questioning, Mr. Bschorr, I just want to clear up the question of the reliance material regarding the Blue Cross case. Pursuant to the agreement between the parties we provided a list of the reliance materials two weeks ago, two weeks ago from today. It's the same list as Exhibit 27. It was produced from both Blue Cross and National Asbestos, and all the materials were returned over a week ago.

MR. BSCHORR: All right. Including -- and you may be right, but including the MacArthur stuff?

MS. PHILLIPS: Yes.

MR. BSCHORR: Okay.

MS. PHILLIPS: Yes, that's on the list.

MR. BSCHORR: Okay. Thank you.

Q. Just a few more questions, Professor Viscusi. What is The Progress and Freedom Foundation?

A. It's a private foundation in Washington, D.C. that does policy-related research.

Q. Are you -- do you have any affiliation with
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that?

A. I did some work in connection with a study of FDA regulations and participated in a study. I believe because I participated in a study, they may list me nominally as some sort of affiliate, but I haven't done any work for them, I've had no contact with them other than that study.

Q. And I take it it's for that reason you didn't list that relationship on your curriculum vitae?

A. Well, it's not a relationship from which I derive any ongoing income, so -- I'm on a lot of people's mailing lists, but I don't participate in their activities, so it would be misleading to list something which I do not actually participate.

Q. From your last answer did I-- do I correctly gather that the items that you do list by way of relationships are only those that you receive a monetary compensation for?

A. No, or involved more active participation and higher level participation than The Progress and Freedom Foundation project I
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worked on.

Q. How long ago did you work on that project?

A. I believe it was five years ago, five to four, so may have started five years ago, ended four years ago.

Q. Let me just read into the record a statement and ask you whether or not you agree with this. "In an influential study of biases and risk perception, Lechenstein, et al. in

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1978 addressed individual assessments of causes of death ranging from floods to botulism to heart disease. The overall pattern observed was that individuals overassessed the chances of low probability events such as tornados and underestimated the chances of high probability events such as diabetes. Although these perceptions are clearly biased in a systematic manner, they do not necessarily reflect irrational behavior. They can be explained by the following adjustment process." And then you go on.

Do you recall writing that article that contained that statement?

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A. And it's also included in one of my books, I think.

Q. And I take it that's an accurate reflection of your views?

A. It is. I'm not sure if most people would know what I was talking about, but yes. I mean, there's a -- it refers to different economic models I use to interpret it.

Q. But you refer to low --

MR. BAILEY: Is there any reason that we can't put it before the witness?

MR. BSCHORR: I don't think we need to. I've read it.

Q. You refer, sir, to --

MR. BAILEY: Objection.

MR. BSCHORR: Great.

Q. You refer, sir, to low probability events and high probability events.

A. That's correct.

Q. What would you classify the risk of smoking and lung cancer death as a result thereof?

MR. BAILEY: Objection.

MR. NEMSER: Objection.

A. The risk per cigarette is a low probability

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event. The risk per pack is a low probability event. The lifetime risk of smoking is a high probability.

Q. In your surveys in asking people about smoking, did you make that distinction to them and ask them about smoking, the difference between one cigarette, one pack and a lifetime of smoking?

MR. NEMSER: Objection.

MR. BAILEY: Objection.

MS. PHILLIPS: Objection.

MR. KRAUS: Objection.

MR. BSCHORR: Thank you, Eric.

A. The survey focuses on the risk to smokers overall, not the risk of a single cigarette.

Q. In connection with your work in this area, sir, did you ever have occasion to review the Federal Trade Commission report on smoking that was done around 1981?

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A. Yes. Not necessarily for litigation, but for my book I read it.
Q. Is there anything in that document things that you rely on for the purposes of your
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opinion here today or that you will be giving in this litigation?
A. I don't anticipate relying on it.
Q. All right. Do you agree with it, the conclusions reached in it?
MR. BAILEY: Objection.
A. Well, it's been approximately 12 years since I've read the report, but I do remember disagreeing with a number of things in the report.
Q. I take it it is not something you keep on your bedside to constantly refer to?
A. No. I may keep it in my file drawer, so I think I still have it.
Q. Okay.
(Pause.)
Q. In doing your survey in 1991 in North Carolina, did you have any understanding going in before the survey was completed as to what the results might be?
MR. NEMSER: Objection.
A. I had no preconceived notion regarding the results. In fact, the purpose of the survey was to explore whether the results would
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change depending on how I framed the question and approached smoking risks.
Q. Would you agree as a general proposition that people are more likely to overestimate than underestimate the risk component of smoking?
A. That's what my results say, yes.
(Pause.)
MR. BSCHORR: I have nothing further. Thank you.
MR. WAGNER: We're done.
THE VIDEOGRAPHER: The time is 5:17. The deposition is concluded. We're off the record.
(Whereupon the deposition was concluded at 5:17 p.m.)
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8 certify that W. KIP VISCUSI, the witness
9 whose deposition is hereinbefore set forth,
10 was duly sworn by me and that such
11 deposition is a true record of the testimony
12 given by the witness.
13 I further certify that I am neither related
14 to or employed by any of the parties in or
15 counsel to this action, nor am I financially
16 interested in the outcome of this action.
17 In witness whereof, I have hereunto set my
18 hand and seal this 11th day of May, 2000.
19
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21 Jessica L. Williamson, RPR, CRR
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24 My commission expires: 12/27/02
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